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The Hand of Time

MAPHARSEN now [illegible] of active [illegible] assumed a leading [illegible] antisyphilitic [illegible] than 150,000,000 doses of MAPHARSEN have been used clinically during the past five years with a minimum of reaction and maximum of therapeutic effect.

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AN INVESTIGATION OF ALLERGY IN ROUTINE NOSE AND THROAT PRACTICE: A REPORT OF ONE HUNDRED PRIVATE CASES*

FRED E. HAMLIN, M.D.,
Roanoke, Virginia.

Many more years of scientific investigation will be necessary before all the etiologic factors concerned in allergy will be known and their significance understood.

During the past fifteen years extensive investigations of the problem of allergy have been made in this country and abroad. Much has been learned but there are a great number in our profession who remain skeptical about the subject. As knowledge of allergy increases, the importance of an early diagnosis by the otolaryngologist is becoming more and more impressive.

In this report of one hundred cases of allergy I wish to show some of the symptoms and complications found every day in the private practice of otolaryngology. I do not make any attempt to treat allergic patients other than local treatment and symptomatic relief, so these patients who were seen in the office were referred to the various men who were doing allergy. In most cases the patient requested his family doctor, therefore there was no standardized form of treatment.

The clinical diagnosis of allergy is based upon the history, including the hereditary background and the personal allergic manifestations. A hereditary tendency to any of the allergic diseases complicates the problem and usually demands more careful and prolonged treatment than the acquired form. The cycle often runs thus: in infancy, colic and eczema; in the older child, intestinal disturbances, hay fever or repeated colds; in the adult, hives, asthma, sinusitis with or without polyp formation, colitis or migraine.

Allergy is a complicating factor very frequently encountered in the practice of otolaryngology. Almost half of the cases of nasal allergy can be satisfactorily managed by the avoidance of the offending allergens or desensitization to them. In another group good results can be obtained by local treatment plus allergic management.

The nasal manifestations of allergy are characterized by sneezing, itching, obstruction, discharge and diminished sense of smell. The gross pathology of the mucous membrane of the nose is chiefly one of edema with marked pallor, and usually covered with glistening secretion. The degree of the pallor and edema is dependent upon the allergic reactions and at times the mucous membrane may appear to be normal. If the allergic reactions are continuous the changes in the mucous membrane become more marked.

The edema is usually more marked on the inferior surfaces of the middle turbinates, the anterior end of the inferior turbinates, and the posterior tips of the inferior turbinates. The tissue in the middle meati is usually edematous, making it impossible to see the maxillary ostia with the nasopharyngoscope. Polyps are frequently seen around the middle turbinates. The size of the polyps varies according to the allergic reaction and duration of the offending allergen. Sometimes during allergic treatment polyps will entirely disappear only to return again during an acute exacerbation. An acute infection may also produce an increase in the amount of the edema, but the symptomatology and cytology of the secretions will usually give a differential diagnosis.

In allergic rhinitis the age of onset varies considerably although it may occur at any age. In this group there was a marked variation as to the time of onset, namely, from infancy to age 77, and noted in 37 males and 63 females. Heredity is undoubtedly

*Read at the annual meeting of the Medical Society of Virginia in Richmond, October 23-25, 1944.
Candidate's acceptance thesis: American Laryngological, Rhinological and Otological Society.

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the most important predisposing factor. Of the 100 examined a positive history of allergy was obtained from 12 males and 28 females.

Several others gave a doubtful history. A comprehensive and painstaking history is essential in order to get a clearer understanding of the patient's illness. The family history is only confirmatory in establishing a probable allergic etiology. Many children have allergy and are treated for recurrent colds. After this treatment is exhausted they are then taken to the otolaryngologist for the removal of the tonsils and adenoids. If the operation is performed, a poor result will usually follow.

Sex seems to have no influence since, according to most authors, males and females are affected in the same ratio. From my observations, however, I note a decided difference in the infrequency of allergic rhinitis in the colored race, especially in the extremely dark type.

As a rule, patients consult the otolaryngologist for relief of a stuffy nose, post-nasal drip, headache or cough, rather than because they suspect allergy. The chief complaints as given by the patients on their first visit to the office were recorded as follows:

TABLE I

	Cases
Watery discharge from nose	13
Stuffy nose	37
Headache and dizziness	16
Hoarseness	8
Deafness	5
Tinnitus	5
Sore throat	4
Asthma	3
Constant colds	8
Earache with headache	1
Total	100

Kuhn and Linton[1] observed 3,657 consecutive cases in an eye, ear, nose and throat practice. Of this group 19 per cent gave ear complaints, 16 per cent consulted them on account of throat symptoms and 20 per cent came on account of nasal symptoms.

In a review of 720 nasal cases they found 19.4 per cent had primary nasal allergy. In reviewing their result 47 per cent were satisfactory by allergic management alone (avoidance and desensitization) and 27 per cent were satisfactory by allergic management plus local treatment.

Agar and Cazort[2] are of the opinion clinical allergy must be considered in 40 per cent of the patients who enter their reception room. To this I fully agree although it is difficult to have 40 per cent of my patients tested for allergy when their symptoms at times are slight. The recognition of the allergic manifestation is often made in the process of a routine ear, nose and throat examination when the patient comes to the office to see about a tonsillectomy. Agar and Cazort in their observations on the incidence of deflected septa and polypi in asthma and seasonal hay fever, are in accord with Smith[3] who observed deflected septa in 22 per cent and polypi in 9 per cent of 500 asthmatics.

How many persons have allergy? Vaughan[4] states it has been estimated that fully 10 per cent of the population of this country suffer from some form of allergy. Up to 2 per cent may have hay fever alone. About 65 per cent of all hay fever victims may later develop asthma. Probably three million persons in the United States are suffering from hay fever and asthma alone.

Quoting Vaughan[5]: "Local nasal surgery is not indicated in cases of extrinsic asthma without preliminary allergic study. In spite of this I find that two-thirds of my series that had previously been operated upon were extrinsic cases. Surgery did not relieve them and they should not have been operated upon."

Of the group of cases investigated, operations had been performed prior to the first visit to the office as follows:

TABLE II

	Cases
Tonsillectomy	62
Submucous resection	10
Caldwell-Luc	1
Window (Subturbinal)	1
Turbinectomy	6
Polyps (Removed)	5

We are all in accord with Mullin[6] that allergy presents an increasingly perplexing problem which requires combined study by the otolaryngologist and the internist and the utmost cooperation on the part of the patient. The otolaryngologist should possess a general knowledge of the manifestations of allergy and close cooperation with the allergist would be of mutual benefit.

In an excellent paper Woodward and Swineford[7] of the University of Virginia have shown the value of a close collaboration between the allergist and rhinologist, giving in detail a report of 128 con-

secutive private cases. In 61 there were no special complications. The remaining 67 showed the following: obstruction from the septum or turbinates, 25; obstruction from nasal polyps, 16; pansinusitis, 9; acute and subacute maxillary sinusitis, 11; and septal or turbinal obstruction without secondary infection, 4.

In a routine rhinologic examination diagnostic classification was made thusly:

TABLE III—VASOMOTOR RHINITIS

	Cases
Obstruction from polyps	9
Deflected septa	16
Pansinusitis	9
Sphenoiditis	2
Ethmoid sinusitis	17
Chronic maxillary sinusitis	10
Acute and subacute maxillary sinusitis	7
Negligible complications	39

Ofttimes a patient will come into the office complaining of post-nasal drip and a severe cough. On nasopharyngoscopic examination the posterior tips of the inferior turbinates will be edematous and seem to be dripping with mucus. I have found local medication to be of very little value in this type of case. This is what Carmody and Greene[8] call "local tissue dropsy". They believe "that the nasal mucous membrane which is normal is resistant and nonfilterable to outside protein invasion, but it becomes, after greater or less period of abuse, due to faulty metabolism of protein from focal infection or faulty tissue chemistry, a spongy hypertrophied dropsical tissue, threaded with dilated capillaries, which give us our symptoms of so-called 'hay fever'. This membrane is now potentially a pathologic tissue and readily permeable to pollen proteins."

The allergens to which these cases were skin sensitive are classified as follows:

TABLE IV	Cases
Epidermals	36
Foods	34
Pollens	13
Bacteria	17
	100

In my group of cases I performed the following operations after the diagnosis of allergic rhinitis was made:

TABLE V	Cases
Tonsillectomy	14
Submucous resection	4
Caldwell-Luc	2
Window (Subturbinal)	2
Turbinectomy	4
Polyps (Removed)	6

Hansel[9] has stated that he found it necessary to do nasal surgery in only 25 out of 220 cases of nasal allergy.

Vaughan[10] advocates that allergic rhinitis should be treated as follows:

"1. In general, allergic therapy should be tried first even in the presence of obvious sinus infection.

"2. Sinus infection should be treated locally, with or without surgery, on its own merits, in the same way that a similar infection should be treated in a nonallergic individual."

Vaughan once told me he preferred getting the allergic patient before the rhinologist started cutting on the nose. I have always remembered this and of the many patients he has treated for me, only once has it been necessary for a submucous resection before good results were obtained.

Piness and Miller[11] specifically state we see too many children who have been treated for repeated "colds", chronic sinusitis, chronic bronchitis by "cold shots", when allergy is the essential cause. They are of the opinion there is less reason for failing to recognize allergic pathologic changes in the nose and throat than there is for failing to recognize allergic symptoms.

Many patients consult the otolaryngologist about ulcers in the mouth. Often it is aphthous stomatitis, more popularly called canker sores. Clarke[12] believes this type of stomatitis is allergic in origin and can be prevented and cured by finding out the offending protein and removing it from the diet.

Singleton,[13] quoting Hansel and Chang, in a study of the relation of allergy and tonsillectomy in children, made the following observations:

1. In the management of frequent colds, sinusitis, bronchitis and recurrent pneumonia the possibility of allergy as an etiologic factor must always be considered.

2. Of 200 children considered as a routine for removal of the tonsils and adenoids because of these complaints, a definite diagnosis of nasal allergy was established in 26, or 13 per cent. It is significant that 6 of these patients had hay fever.

Gatewood[14] decides that interference with the physiologic function of the gastrointestinal tract fre-

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quently sets up a toxic condition in the lower part of the bowel which causes it to become a reservoir for infection, later to be conveyed by the lymphatics and vascular systems to distant parts of the body. He is of the opinion persistent post-nasal drip, vertigo, rhinorrhea and dryness and stuffiness of the nose can be secondary to an intestinal tract disturbance in the absence of any causative factor in the ear, nose and throat.

Headache is often complained of by patients and they seek the advice of a "head specialist" for relief. Rinkel[15] reports on a study of headache due to allergy and classifies them as follows: the migraine type, a type which is associated with nasal allergy and sinusitis; and a type which is due to a general allergic reaction.

Out of this group of patients only five came into the office complaining of deafness. An audiometer examination was made on all patients diagnosed allergic rhinitis, using 2-A audiometer. Deductions will have to be made, as the examinations were made in an office reasonably free from street noises but not in a soundproof room. The average hearing loss for speech in the 37 males was right ear 20 per cent and left ear 22½ per cent, while in the females the loss was right ear 25 per cent and left ear 27 per cent.

One would expect a certain amount of deafness to be present due to the general edema of the nasal mucous membrane encroaching upon the mouth of the eustachian tube.

Chun-Yue Mao[16] examined 535 deafened children. Fifty-three per cent were biologically deafened while 47 per cent were pathologically deafened, and 28.6 per cent of the biologically deafened showed a positive reaction in the scratch or the intracutaneous test for allergy. By the same method, the pathologically deafened showed 28.5 per cent positive reaction. The incidence of allergy in the deafened children in his group was 27.44 per cent higher than for the largest numerical group of children with normal hearing reported. He believes there is definite evidence to indicate a higher percentage of allergic reactions in deafened children than in children with normal hearing.

In a survey of the audiometer records of 500 normal individuals, Lawrence[17] reports a marked variation in hearing ability as determined by that method of measurement, and is of the opinion that this variation indicates the hearing acuity is less influenced by training or vocation than by the nutritional level of the individual. In his conclusions he shows 14 out of 19 cases, or 73.6 per cent, improved after treating the metabolic derangement associated with the deafness by the administration of an extract of the endocrine gland at fault.

Schenck[18] believes we would expect tinnitus and a sense of full feeling in the ears or even some impairment of hearing as the result of allergic reactions in the mucosa of the eustachian tube. But when we find numerous eosinophiles in the discharge from the middle ear following pain, fever and spontaneous rupture of the tympanic membrane, it is necessary to consider seriously the effects of allergy in the middle ear.

X-ray study of the maxillary sinuses during an allergic attack has been of little value to me. The thickened membrane causing an opacity usually subsides after the allergic attack, providing the duration is not prolonged. Proetz[19] has shown that cloudy sinuses may be due to allergic swelling or polypoid degeneration of the mucous membrane.

Hansel[20] emphasizes the value of cytologic examinations of the nasal and sinus secretions as an aid in the differential diagnosis of allergy and an acute nasal infection. He instructs his patients to blow their noses on a piece of waxed paper and then examines the discharge for eosinophiles.

Many authors have been enthusiastic about ionization in allergy and some favorable reports have been made. My experience with ionization has been so limited that I have failed to see any startling results. Duke[21] in his review of the literature on ionization, is of the opinion all of the present day literature is characterized by rather bold statements backed up by little published clinical, experimental, pathologic or immunologic data which can stand up under constructive review.

There is a close relationship in allergic rhinitis with a low metabolic rate and a slow pulse, and may not present any other symptoms of hypothyroidism. It was not possible to obtain a metabolic report on all cases. Of the 62 examined, males were minus 19 and plus 5; females were minus 31 and plus 2.

Quoting Hansel[22]: "The administration of thyroid extracts for the treatment of so-called vasomotor rhinitis has been employed for many years and many

reports have appeared in the literature on the relation of hypothyroidism or myxedema to the hypersensitive nose. A certain percentage of satisfactory results has been reported from the administration of thyroid. Many observers believe that hypothyroidism is the primary cause in many of these cases. A recent report on the relation of hyperthyroidism to vasomotor rhinitis by Forman, however, calls attention to the fact that patients with nasal allergy may or may not have evidence of hypothyroidism. He calls attention to the fact that a patient with nasal allergy may have a low basal metabolic rate and yet present no other signs of hypothyroidism. He, therefore, emphasizes the importance of a thorough clinical investigation of these patients to determine definitely whether a low basal metabolic rate indicates or proves that hypothyroidism is present. In those patients, therefore, who present the nasal manifestations of allergy with a definite, proved hypothyroidism, the administration of thyroid extracts may be an important adjunct in the treatment."

The following classification shows the progress of treatment and was obtained by personal contact and questionnaires:

TABLE VI

Satisfactory by allergic management (avoidance and desensitization)	45
Satisfactory by allergic management and local treatment	24
Satisfactory by allergic management plus surgery	17
Poor results (non-cooperative)	14

CONCLUSIONS

1. Early recognition of allergy by the otolaryngologist would be of economic value to the patient.

2. No doubt if the nasal condition in this group had been recognized as of allergic origin, better results could have been obtained, but little attention was paid to allergy when the majority of these patients were children.

3. Nasal pathology would require less surgery if we had more allergic investigation.

4. Deafness is a complicating factor in allergy.

5. The otolaryngologist should always keep in mind that his specialty is not isolated, but is closely allied to internal medicine, and good results are often obtained by eliminating systemic disturbances by means of close cooperation with the internist and patient.

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DISCUSSION

DR. W. RANDOLPH GRAHAM, Richmond: Allergic rhinitis, with its many complications, is unquestionably a very common disease. Therefore, as Dr. Hamlin has pointed out, its true nature should be more frequently recognized so that handicapping and ofttimes serious sequelae may be prevented. The ideal team for its detection is one composed of otolaryngologist, internist and allergist working in close cooperation, and, one might add, in close harmony.

The diagnosis of allergy in the nose, or elsewhere, for that matter, is not always easy. Unfortunately we have no single trustworthy test for allergy as we have for syphilis and certain other diseases. We do have certain presumptive *tests,* but for the most part diagnosis is a matter of clinical acumen. The following may serve as diagnostic criteria, but not infrequently several of these guides must be satisfied before the true state of affairs is ascertained: (1) allergic history; (2) typical or suggestive physical findings; (3) cytology of nasal secretion; (4) character and degree of skin reactions; (5) nature of nasal contact tests; (6) effect of epinephrine on subjective and objective symptoms; and (7) presence of polypi. Hansel has drawn attention to the similarity between the findings in bronchial asthma and allergic rhinitis.

In management, as in diagnosis, our same trio must continue to work together in order that the best interests of the patient may be served. Adequate desensitization plus avoidance of offending allergens should give prompt and satisfactory relief for a considerable number of these sufferers, but for optimum results the otolaryngologist must be called upon to remove obstructive processes, clear up intercurrent infection and prevent complications in the nose and accessory sinuses. The internist likewise frequently has an important role to play in correcting abnormal conditions that arise in other parts of the body and which may directly or indirectly affect the nose. Hypothyroidism is a typical example.

Like the late Dr. Warren T. Vaughan, I feel that far too many cases of extrinsic asthma and rhinitis have nasal surgery prescribed, and that many persons with even obvious sinus infection can be cured or at least benefited by adherence to a proper anti-allergic regime.

I have enjoyed Dr. Hamlin's paper very much and am in complete agreement with all its major premises.

DR. HAMLIN, closing the discussion: First, I wish to thank Dr. Graham for his kindness in discussing my paper.

I should like to suggest that the ear drum be examined before making a metabolism test. Recently I noticed an article in a medical journal mentioning that a metabolic test was made and the reading was plus 60. A repetition of the test gave the same reading. Upon examining the ear a large perforation was found in the drum. The ear canal was packed tightly with cotton and another test was made. At this time the reading was minus 8.

The present treatment of allergy is not perfect but it furnishes a splendid line of approach.

Floral Eponym (35)

SWIETENIA

GERHARD VAN SWIETEN, 1700-1772

Swietenia is a species of tropical American trees of the family Meliaceae. The best known is S. mahógoni which is the mahogony of commerce.

Gerhard van Swieten was the favorite pupil of Boerhaave, the great Dutch clinician. He went to Vienna as court physician to Maria Theresa, where he had much to do with the rise of the old Vienna school which he reorganized after the Leyden pattern. As prefect of the Imperial Library at Vienna he raised it to first rank. How he became the Empress's physician is an interesting story. The Archduchess Maria Anna, the Empress's sister, was visiting in Brussels when she gave birth to a stillborn baby. Van Swieten was called in consultation. The Empress was so impressed by his obstetrical knowledge that she consulted him for her sterility. His advice was so excellent that in due time she had sixteen successive pregnancies.

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PROPHYLAXIS AGAINST CERVICAL MALIGNANCY

J. W. KENNEDY, M.D., F.A.C.S.,
Philadelphia 3, Pennsylvania.

There is no organ in the entire gynecological field which is so subject to malignancy as the uterus. The liability of the uterus to malignant neoplasia is associated with certain factors which are peculiar to the organ.

The metabolic changes of different degrees occur in all organs, but the size and structure of most organs in the adult remain more or less constant. This is not true in the uterus where almost constant structural changes are taking place. Such changes are accompanied by an imbalance of epithelial and other structural elements. This constant unstable structural equilibrium is prevalent and predisposes the organ to malignant cell dedifferentiation; therefore, throughout adult life the epithelia and stroma elements of the endometrium are in a constant state of structural change or transition during various phases of the menstrual cycle. Further, at the menopause, during pregnancy and in the puerperium gross changes occur in size, vascularity and epithelial elements of the organ. These mutations plus the liability of the cervix to trauma of labor, too often followed by chronic infection and irritation, all provide a fertile field for malignancy.

We would suggest the term cervical erosion be changed to pseudo-adenoma of the cervix with the thought the same would place the condition in the field of tumors. This might add greater importance to the lesion which so often leads to malignancy. At least the change in nomenclature might have a psychological stimulating effect toward better prophylaxis against later malignancy.

We cannot have continued epithelial imbalance over long periods of time without cellular transition to dedifferentiation which is followed by a more embryonic type of cells seen in histological picture of carcinoma.

It should be kept in mind that the extent of cervical involvement cannot be estimated by external examination, nor is the location of cervical involvement of malignancy sufficiently defined in its outline for us to say removal of any special area for purpose of biopsy is an assurance that no malignancy exists in the remaining nine-tenths of cervical structure.

In no sense are we stressing the frailties of biopsy revelations. We believe in the same, but we are forced to discuss the relative values which present themselves in the attempts at salvation of a sterile uterus which so kindly lends itself to complete extirpation. What is the value of the sterile uterus, what is the percentage of errors in diagnostic means of investigation, what is the cost (mortality and morbidity) of removal of the sterile uterus? On account of our discussion of relative values in its relation to value of the uterus, its price of removal (mortality and morbidity) and the possibilities of errors in diagnosis by biopsy or other means, we have been accused of being a laboratory nihilist. This is untrue in every particular.

We have said in literature a number of times that we do not question the value of biopsy; the laboratory is not in the balance for refutation, but superlative degrees of dependence must not be placed on ultra-refinements of histopathology and specially is this so when complete extirpation of the sterile organ can be performed with a mortality of one or a fraction of one per cent by vaginal hysterectomy clamp method. Such results must be compared with the percentage of errors by any means of diagnosis. Is the laboratory correct in ninety-nine per cent of examinations? It must be so to compete with the low death rate in the removal of a sterile organ followed by a splendid postoperative history. This is what we mean by relative values and is in no way a denial of the value of the laboratory. The world's best pathologists are calling our attention constantly to the relation of childbearing followed by injuries of the cervix and the influence of such trauma on later malignancy.

The gynecological profession has been tardy to a profound degree in accepting the teaching of the pathologists that the abused cervix means later malignancy in an incriminating degree of cases. The surgical treatment of the malignant uterus or the surgical treatment of prevention of the same practically received its death blow when radium came to the front. Thank Providence today there is an effort being made to resurrect the surgical treatment of the malignant uterus.

For sixty-five years, we, in the Joseph Price Hos-

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pital, have never wavered in our views of prevention and treatment of the malignant uterus. We have received a very ignoble amount of criticism for our stand, but today we are rewarded by a regeneration of the surgical treatment of uterine malignancy.

In regard to prevention and cure of the malignant uterus our profession has shown an indifference which amounts to personal carelessness and profound neglect in their analysis of cause and effect in regard to injury and pathologic conditions of the cervix as predisposing causes of later malignancy.

The message of this discussion is just this: prevent the abused cervix and we save ninety-five per cent of the patients who will later die from the malignant uterus.

Dr. Cashman, of Pittsburgh, reports ten thousand patients who have been treated for symptomatic cervix by cautery with but two later cases of malignancy.

In the work of the late Joseph Price plus my work extending over sixty-five years of gynecology, neither of us has had a single case of cervical malignancy following our repairs of the organ.

How much more evidence of prophylaxis against malignancy of the cervix does the profession demand before they are awakened from this chrysalis stage of thinking and action? In our experience in ninety-five per cent of our patients of malignancy of the uterus, the cervix was involved, and practically all of these patients had borne children. Certainly there is no thought that more challenges us to return the cervix to its normal outline and relation to other pelvic structures. This can be done in practically every instance by proper deep repair of the cervix. If the profession has failed in the proper repair of the cervix and thereby failed to prevent later malignancy of the organ, it is a personal matter and not a failure of cause and effect. This is true as far as our experience goes.

We have said that repair of the cervix is a lost art and has almost completely disappeared from our clinics. We feel the fault has been that the repairs have been too superficial and, further, absorbable sutures have failed to produce union of the cervical tissues which are slow to repair. We use no absorbable sutures; all repairs are performed by the use of silkworm-gut. We have fully illustrated and discussed this work in a monograph on vaginal hysterectomy.

In regard to the relation of the abused cervix to later malignancy, there is nothing obscure in the relation here of cause and effect. There is no necessity for us to deal in platitudes when facts are a life's experience. There is no greater exhibition of neglect in all surgery or medicine to my knowledge than that seen in the everyday indifference shown by our profession, than that revealed in the opportunity to prevent malignancy of the uterus by repair of the cervix or other means which have given splendid results in the hands of others. Further confirmation of this thought is the precept, there is no organ in the male or female where prevention of malignancy can so uniformly be accomplished, nor is there any organ in male or female where early malignancy can so uniformly be cured as that of the uterus by removal of the organ by vaginal hysterectomy clamp method, preceded by proper use of the cautery.

We have no intention to discuss the operation, as such has been completely illustrated and discussed elsewhere. In this paper we have purposely dealt largely with the cervical malignancy following neglected injuries incident to childbearing. However, the same message applies to all pathological conditions of the cervix which lead to later cellular dedifferentiation.

In regard to prevention and treatment of malignancy of the uterus, the profession must march as a solid phalanx, first, to prevention by the means discussed of the abused cervix; next, the removal of the sterile symptomatic uterus on the earliest date possible in practically all cases, and, finally, the recognition of malignancy by any and all means in the sterile uterus must approach ninety-nine per cent of accuracy, ere such can be accepted as the total extirpation of the organ has no greater mortality.

The last word in prevention and treatment of malignancy will not be irradiation, but will be early surgery in all glandular organs which permit removal.

241 N. 18th Street.

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SAMUEL THOMSON, PATENTEE, AND THE THOMSONIAN SYSTEM

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In his own hand, Dr. John Richards wrote on the fly leaf of the tenth edition of Samuel Thomson's "New Guide to Health or Botanic Family Physician" *John Richards Right Patent, Price $20.00. Perry Park, Sept. 15, 1834.* Dr. Richards' great-granddaughter gave the writer this small volume and two companion volumes relating to the Thomsonian system. These three books aroused my interest in Samuel Thomson, and the Thomsonian doctors who were plentiful in Virginia during the past century. This brief account is presented as a historical review of a fad, which, though accepted by many, was eventually rejected, but not without having for a time enjoyed considerable popularity among the people and not a few medical men of influence in America.

Samuel Thomson was born at Alstead, Cheshire County, New Hampshire, on February 9, 1769. His father was a pioneer in the state. Samuel related that he had his first medical experience when he was four years old. He ate lobelia, which is the same plant commonly known as Indian tobacco in Virginia. He proudly claimed this as his own discovery. His subsequent knowledge of herbs he gained from an old herb woman. When he was sixteen he made application to a Dr. Fuller, a root doctor, and was refused because of inadequate learning. He was not thwarted in his desire to know more about native herbs, which he used himself through the years. This part of his life he spent on his farm near Alstead, which had been given him by his father, and here he prepared many concoctions, which he took himself to know the effect.

He found a stimulus to begin practice in his own family. He related in his book that his wife recovered under his own ministrations after having had eighteen postpartum convulsions, discharging seven physicians, securing the aid of two root doctors and other assistance. Thoughtfully, he added, his farm work was well behind and the expense incurred was more than two hundred dollars. Fishbein notes that Andrew Still, the founder of osteopathy, fell for manipulations when one of his own children recovered under his ministrations. Thomson wrote that these successes and the distrust of the regular physicians led him into practice. He began by travelling through New Hampshire, Vermont, Maine and Massachusetts. His story is well written and interesting. The authorities on one occasion had him arrested on the charge of murdering a patient. The patient had been given a dose of his favorite lobelia. He was put in jail, brought to trial and dismissed. He finally settled at Beverly, Mass.

He was militant in his attitude to the regular physicians, whom he spoke of as the medical faculty. His main objection to these men and their practice arose from the general use of mineral drugs—mercury, arsenic and salt petre. The use of opium, he regarded as dangerous. "Pain is caused by disease and there is no other way to relieve it but by removing the cause." In many tilts with the medical faculty, according to his story, he was successful, until he began litigations and then he admitted frankly, "Most of those of the learned professions have become active opponents."

In 1813, he secured patents for his system of botanic medicine. Dr. Samuel L. Mitchill, prominent New York physician, backer of Robert Fulton, Congressman from New York and a versatile gentleman, aided him in securing these patents. The help given must not be over emphasized. Dr. Mitchill supplied for him the proper names of the drugs, or crude herbs, as accepted in the current materia medica, an act of kindness which no politician could have refused. He secured a second patent on January 28, 1823. He denied that "he wished to monopalize but to get government protection against the machinations of enemies." His honesty and forthrightness are convincing. He sold these patents to individuals for twenty dollars. To anyone who desired to practice the system, he sold the rights for one hundred dollars and gave them the benefit of personal aid, and his books. Certainly the price asked was not too much for thirty years of herb eating and the experience had during those years. "I have endeavored to convince by demonstrating the truth."

"There is one thing I think cannot be a matter of doubt—that I have been the cause of awakening a

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spirit of inquiry among the people of this country." It is a matter of conjecture that he had any influence on scientific medicine. He wrote further that the abuse of a Mr. Whitlaw, by the medical profession, "is the best evidence of its (steam) utility. It gives me much pleasure to think that I have been instrumental in introducing a new system of medical practice—by relieving in a great measure the sum of human misery."

THE SYSTEM

"NUMBER ONE: To cleanse the stomach, overpower the cold and promote free perspiration.
Emetic herb: Lobelia Inflata of Linnaeus.

"The most important article made use of in my system of practice, without which it would be incomplete, and the medical virtues of which, and the administering it in curing disease, I claim as my own discovery.

"NUMBER TWO: To retain the internal vital heat of the system and cause a free perspiration.
Cayenne-Capsicum.

"I never had any knowledge of cayenne being useful as a medicine or that it had been used as such until I discovered it by accident.

"NUMBER THREE: To scour the stomach and bowels and remove the canker.
Bayberry or candleberry—a species of myrtle.
White pond lilly—the root.
Hemlock—the inner bark.
Marsh rosemary—the root
Sumack—bark, leaves and berries.
Witchazle—the leaves.
Red raspberry—the leaves.
Equan weed—Indian name cocash.

"NUMBER FOUR: Bitters to correct the bile and restore digestions.
Bitter herb, barberry, and popular bark.
Bitter root, golden seal.

"NUMBER FIVE: Syrup for dysentery to strengthen the stomach and bowels and restore weak patients.
Peach meats.
Cherry stones.

"NUMBER SIX: Rheumatic drops to remove pain, prevent motification, and promote a natural heat.
Gum myrrh.
Spts. Turpentine
Gum Camphur.

"NERVE POWDERS: American Valerian or Ladies slipper, sometimes called umbil or male and female nervine."

These are classed as the important "vegetables" made use of in the system of practice. In addition Thomson mentioned the use of spearmint, peppermint, pennyroyal, summer savory, hoarhound, elecampane, may weed, wormwood, tanzy, camomile, bitter sweet, mullen, burdock, skunk-cabbage, wakeribin, thoroughwort, featherfew, clivers, black birch bark, evan root, slippery elm bark, balsam fir, ginseng, snake root, mustard, horse-radish, balm of gilead, butternut, blue and white nervine, pipsissewa, goldenrod, meadow fern, yellow dock, prickly ash, bitter thistle and archangel.

In detail he advises in his book which drugs should be given, how the crude drugs should be prepared and combinations of the several numbers to get certain results. They constitute in all a most remarkable empirical system of medical treatment.

MIDWIFERY

"Conclusions as long experience and much solicitude has enabled me to form, concerning those who are suffering, and are constantly liable to suffer from the erroneous and most unnatural practice of the present day. The practice of midwifery, at this time (1834) appears to be altogether a matter of speculation with the medical faculty by their exhorbitant price for attendance. The tax on the poor class is very heavy and this is not the greatest grievance that they have to bear, for they are often deprived of their wives and children by such ignorant and unnatural practice as is very common in all parts of the country.

"Thirty years ago the practice of midwifery was principally in the hands of experienced women, who had no difficulty; and there was scarce an instance known in those days of a woman dying in the childbed, and it was very uncommon for them to lose a child; but, at the present time, these things are so common that it is hardly talked about. There must be some cause for this difference, and I cannot account for it in any other way than by the improper treatment they experience from the doctors, who have now got most of the practice into their own hands. In the country where I was born, and where I brought up a family of children, there was no such thing thought of as a doctor; a midwife was all that was thought necessary, and the instances were very

rare that they were not successful, for they used no art; but, affording such assistance as nature required, gave herb tea to keep them in a perspiration and to quiet the nerves.

"All the valuable instruction I ever received, was from a woman in the town where I lived; who had practiced as a midwife for twenty years; in an interview of about twenty minutes, she gave me more useful instruction than all I ever gained from any other source".

PUBLICATIONS AND SOCIETIES

The New Guide to Health or Botanic Family Physician containing a complete System of Practice was published in thirteen editions, the first appearing in 1822. The last edition of this book appeared in the name of a son, John Thomson. A narrative of the Life and Medical Discoveries of Samuel Thomson had appeared in ten editions by 1835. Samuel Robinson's Lectures on Medical Botany denominated Thomson's New Theory of Medical Practice, delivered in Cincinnati, Ohio, was published in 1835. These three volumes, which came into my possession were the property of Dr. John Richards.

In 1832, Dr. Thomas Hersey began publication of the Thomsonian Recorder. The first National Convention was held in Columbus, Ohio. In 1838, the Convention resulted in a split, which brought about the organization of the followers of Thomson into the United States Thomsonian Society. Alva Curtis, of Ohio, led the opposing faction into the Independent Thomsonian Botanic Society.

Thus, the last years of Samuel Thomson were embittered by controversies among his own followers. His sons were arrayed against him, and when he refused to follow them, they organized the "Eclectic School". Samuel Thomson died in 1843 The rest of the story is that of that branch of medicine today known in this country as the Eclectic. It was reduced to one school in Cincinnati in 1925, with a complete enrollment of one hundred and forty-eight students and thirty-eight graduates. There were at one time nine schools, scattered through the country.

THOMSONIANS IN VIRGINIA

It seems that Virginia has always shared in the fads and quackeries of each generation. At one time there were reported to be near fifty practitioners of the Thomsonian System. While many of these were purchasers of the "Rights", some were medical men who for one reason or another also took out the "Rights". In nearly every county there were one or more Thomsonian doctors during the past century.

An infirmary was opened in Petersburg by the Thomsonian, Dr. Benj. M. Thomson. In Richmond, Dr. E. D. Robinson advertised in 1844 that he had botanicals and was prepared to take care of patients at his office on Shockoe Hill. As early as 1836, the Richmond Thomsonian Infirmary was advertised in Richmond. It was located opposite Trinity Church and was superintended by Dr. George K. Hooper

These men used very attractive advertisements in the local papers to entice the ignorant. One offered to purchase diseased servants, and liberal prices were offered for those considered incurable. Another claimed cures in eight out of ten of those who applied who had been pronounced incurable.

Blanton states that "the Eclectics must have felt that they had gained a good foothold in Virginia, for, in 1846, they set about founding a school in Petersburg." It was incorporated by an act of the Assembly March 8, 1847.

Samuel Thomson had a large degree of native ability. Dr. Benjamin Waterhouse, who introduced Jenner's method of vaccination in the United States and supplied Thomas Jefferson with the product wrote:

"Had John Hunter, whom I knew well, been born and bred where Samuel Thomson was, he would have been just such another man; and had Samuel Thomson been thrown into the same society and associations as John Hunter he would, in my opinion, have been his equal, with probably a wilder range of thought; but both are men of talent and originality of thought."

Thomson visited Dr. Benjamin Rush and presented his theories to that foremost leader in American Medicine. Rush died soon afterwards and left no memorandum of his opinion, of either Samuel Thomson or his system.

It is a profound misfortune that anyone with native mental capacity such as that possessed by Samuel Thomson could not have had the benefits of cultivation by formal education. The vagaries and sloughs of his life might have been relieved and his mind divested of that poison ignorance which made him a lesser figure than he should have been as a pharmacologist and clinicist. We came to denounce Samuel Thomson as a quack and turn aside with sincere regret that he had no worthwhile

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educational opportunities in youth. Out of ignorance, substandardized colleges, and faulty curricula will arise once more such figures to prey upon a gullible public. There can be no "shorter" cuts to Scientific Medicine tomorrow than there were yesterday.

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How Heart Disease Brings Sudden Death.

An editorial in the December 8 issue of *The Journal of the American Medical Association* pointed out that myocarditis, inflammation of the heart muscle, is second only to a ruptured aortic aneurysm as the cause of sudden death. An aneurysm is a sac formation of the wall of the heart due to a weakening or degeneration of the heart muscle.

The editorial stated that "myocarditis occurs secondary to many diseases of bacterial or virus origin and to some conditions of undetermined origin. The following incomplete list mentions conditions in which acute myocarditis has been demonstrated at necropsy [postmortem examination]: diphtheria, typhoid, para-typhoid, typhus, dysentery, mumps, pneumonia, scarlet fever, meningococcic infection, gonococcic infection, tularemia, streptococcic and pneumococcic meningitis. . . ."

It is difficult to separate the features due to myocarditis because it is usually masked by the primary disease. However the common characteristics usually are labored breathing, discomfort over the heart, palpitation, pallor, and weakness of the pulse out of proportion to the severity of the general infection. The pulse is usually rapid and irregular and the blood pressure is, as a rule, low.

The Journal stated that it was important to recognize the existence of this condition because "with the frequency of infectious diseases and miscellaneous infections there are but few persons who during a lifetime do not have inflammatory myocardial foci."

Sex Endocrinology—For the Medical and Allied Professions.

Schering Corporation has just released the first edition of a new monograph on sex endocrinology. The volume of ninety-six pages, including eight full page plates of four colors each, brings to the reader the latest information on the diagnosis and treatment of sex endocrine disorders. All subject matter is presented concisely, lucidly and with omission of all confusing theoretical considerations. A brief and interesting history of the development of modern hormone concepts is included.

In the section dealing with the chemistry of the sex steroids, structural formulas are presented and the similarity in molecular configuration briefly discussed. Recommended therapy is highly practical, for specific preparations and dosage—what to give, how much, how often and for how long—are enumerated simply and clearly. Tables are included for ready reference and aid in fixing elusive facts firmly in mind. Diagrammatic representations of the influence of pituitary hormones on the gonads as well as of photographs of patients with various endocrine disturbances are presented.

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UNSUSPECTED TUBERCULOSIS

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Mass x-ray examination by such groups as Selective Service[1] and the U. S. Public Health Service[2] has revealed that approximately 1 per cent of apparently healthy individuals will show pulmonary lesions of tuberculosis. It has been estimated that from one-third to one-half of this 1 per cent are active or probably active. Surveys of general hospital and clinic admissions[3,4,5] have revealed that approximately 3 per cent have definite pulmonary lesions, and that 0.3-0.4 per cent have active pulmonary tuberculosis. Sixty to 70 per cent of cases so discovered are in the minimal stage.

In an effort to approximate the number of unsuspected cases of tuberculosis passing through the Medical College of Virginia Out-Patient Clinic, a study was made of patients attending the Prenatal Clinic. The prenatal cases were selected for the study because the follow-up of that group was more satisfactory. In addition, because of the ill effects of pregnancy on untreated tuberculosis, it was felt that the diagnosis of unsuspected pulmonary tuberculosis in this group was of primary importance.

Because of the shortage of the standard 14 in. by 17 in. celluloid x-ray films during the period of investigation, it was impractical to have roentgenograms made in each case. Accordingly, it was decided to fluoroscope each patient and to x-ray all cases where definite or suspected pulmonary lesions were found by fluoroscopy. Chest films were also made in cases where fluoroscopic examination was unsatisfactory because of the thickness of the chest. Also, when there was a known contact with tuberculosis and the fluoroscopy was negative, a chest film was taken. The latter two groups were to serve as a "check" on the relative accuracy of the fluoroscopic examinations. Since the standard 14 in. by 17 in. chest film has been shown to be the most accurate roentgenographic means of diagnosing pulmonary tuberculosis, it was conceded that the fluoroscope would fail to reveal some lesions demonstrated by x-ray. The interpretation of chest films were made by different individuals so as to prevent prejudice in their reading.

MATERIAL AND RESULTS

The patients attending the Prenatal Clinic are of the lower economic strata and none are private patients. Approximately 85 per cent are negroes. Nineteen per cent had previous x-rays of the chest within a 5 year period. Two cases of known pulmonary tuberculosis are not included in this study.

The age groups of those examined are in figure 1.

FIGURE 1: AGE DISTRIBUTION.

AGE RANGE	NUMBER	PER CENT
12-14 years	14	1.9
15-19 years	231	30.0
20-24 years	265	34.3
25-29 years	147	19.0
30-34 years	82	10.6
35-39 years	27	3.5
40-44 years	6	0.7
Total	772	100.0

During the period of fluoroscopic survey about 2,000 patients attended the Prenatal Clinic. Of this number 772 were examined by fluoroscopy. In 20 cases lesions were seen on fluoroscopy that were proved by x-ray. The lesions discovered are divided into two major groups: 1. The clinically significant, in which are included all active and probably active lesions; there were 7 cases (0.9 per cent) in this group—5 of these were colored and 2 were white.

2. Clinically insignificant lesions, in which are included apparently healed pulmonary tuberculosis, cases of pulmonary fibrosis probably non-tuberculous, azygos lobes and apparently healed hematogenous tuberculosis; 13 cases (1.7 per cent) fell in this group. In figures 2 and 3 the types of lesions are classified further as to their exact nature.

FIGURE 2: CLINCIALLY SIGNIFICANT LESIONS

Moderately Advanced, Active	1
Minimal, Active	4
Minimal, Probably Active	2
Total	7 (0.9 per cent)

FIGURE 3: CLINICALLY INSIGNIFICANT LESIONS

Minimal, Inactive	5
Healed Hematogenous	3
Interlobar Fibrosis (Marked)	2
Lower Lobe Fibrosis (Non-tb.)	2
Azygos Lobe	1
Total	13 (1.7 per cent)

There were 94 cases that were negative by fluoroscopy, but because of thickness of the chest, or because of known contact, films of the chest were made. In this group one film revealed a definite lesion: A case of healed, minimal, apical, pulmonary tuberculosis.

COMMENT

It is generally accepted that physical signs and symptoms are usually absent in minimal lesions, and are frequently absent in advanced lesions of tuberculosis. Consequently, if tuberculosis is to be discovered early, it is necessary to examine all individuals roentgenologically. Robins found a 0.13 per cent to 0.28 per cent yearly incidence of disease among a group with previously negative chest films. This suggests the necessity of periodic examinations, if a case finding program is to discover the maximum number of cases in the early stage. Because of the usually rapid progression of this disease in the negro, it is unlikely that a very large percentage of cases will ever be discovered early in this race, even with periodic examinations. This fact is brought out by recent mass surveys[1, 7, 6, 3, 8] that have shown that the incidence of disease is approximately the same in the white and colored races, although the death rate is many times higher in the latter. The early lesions in the Negro progress into the advanced stages within a comparatively short period of time, and as a result, most cases of tuberculosis among this race will probably continue to be discovered as the result of clinical manifestations of the disease.

Eisele et al.,[9] making a fluoroscopic study of 10,968 white prenatal patients at the Chicago Lying-In Hospital, demonstrated an incidence of 1 per cent clinically important tuberculosis. At the Margaret Hague Maternity Hospital, Perlberg[11] found 1.2 per cent of clinically significant lesions among 2,824 prenatal cases that had routine chest films. Graham[12] found 1 per cent active cases of tuberculosis among 800 private prenatal patients on routine chest films.

Comparable figures have been reported among general hospital admissions. Childress, Debbie and Harmon[5] examined by chest films all admissions to the Grassland (New York) General Hospital over an 18 months' period, and found lesions of re-infection tuberculosis in 2.8 per cent, and active lesions in 0.35 per cent of patients examined. In a similar study at the Wisconsin General Hospital, Pohle, Paul and Oatway[13] found 3 per cent to have significant pulmonary lesions and 0.3 per cent to have active pulmonary tuberculosis.

In the present study 772 prenatal patients were examined fluoroscopically and 0.9 per cent were found to have significant pulmonary lesions. Five (0.65 per cent) had definitely active pulmonary tuberculosis. In an additional 13 (1.7 per cent) cases pulmonary lesions were noted that were of no clinical importance. The pulmonary lesions discovered were all asymptomatic, and no abnormal signs were found on examination. They were all unsuspected lesions, since all cases of known tuberculosis were excluded.

The total yearly clinic registration is approximately 6,000. If the incidence of tuberculosis found in the Prenatal Clinic holds for the entire clinic, approximately 60 cases of active, or probably active, tuberculosis pass unsuspected through the clinic each year.

In examining the x-ray films taken in cases where no definite lesion was seen on fluoroscopy (contacts and thick chests), one lesion was discovered. This was the case of healed, minimal, apical tuberculosis that was mentioned previously. The lesion missed on fluoroscopy was limited to the supraclavicular region, which is the most unsatisfactory area of the lung field to examine because of the bony structures in this area. It should be mentioned that most of the small lesions in this area are inactive or healed. The site of most of the early post primary lesions is in the subclavicular region, which is a comparatively satisfactory area of the lung field to examine fluoroscopically. It must be emphasized that the standard 14 in. by 17 in. x-ray film remains the most accurate means of discovering small pulmonary lesions. However, the cost and shortage of these films at the present time prevents their use as a routine procedure.

Within the next few years it is likely that routine roentgenologic examinations will become available to all population groups. In view of the work of

Robins,[6] showing a yearly incidence of 0.13 per cent to .28 per cent of disease among those with previously negative chest films, the problem is not only to include the entire population in a mass survey, but to work out a program of periodic roentgenologic examinations. It is very likely that the fluoroscope will be an important instrument in achieving this goal. Its relative inaccuracy will probably be overbalanced by the increased availability of this equipment in the future.

The accuracy of the fluoroscopic examination is, of course, in direct proportion to the experience of the operator, and if the use of the fluoroscope becomes widespread, it will be necessary for medical schools and teaching hospitals to include the teaching of fluoroscopy as part of the physician's education.

If chest films should be made easily available and at a nominal cost, the need of routine chest fluoroscopy in the physician's office would be eliminated. As the result of the development of the 4 in. by 5 in. film and the 35 mm. and 70 mm. x-ray equipment, the time may be near when inexpensive chest films will become available to private and clinic patients alike. Inexpensive and easily available chest films would result in an immediate expansion of the present case finding surveys and probably would accomplish more than anything else in the conquest of tuberculosis through early diagnosis. The time is at hand when complete physical examination should include some radiological chest examination.

SUMMARY

1. During an 18 month period 772 patients in the Prenatal Clinic were fluoroscoped. Twenty (2.6 per cent) were found to have pulmonary lesions, and of these, 7 (0.9 per cent) had clinically significant pulmonary tuberculosis. This experience is compared with other surveys of similar groups.
2. Six of the seven cases of significant lesions were in the minimal stage. One was moderately advanced.
3. It is estimated from this study that approximately 60 cases of unsuspected active tuberculosis pass through the Medical College of Virginia Out-Patient Clinic each year.
4. Because of the yearly incidence of tuberculosis, case finding programs should include periodic x-ray examinations.
5. In order to achieve this goal of periodic roentgenologic examination, it is necessary that such examination become less expensive and more easily available. The more recently developed small film x-ray equipment should go a long way toward bringing this about.

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Schering Corporation,

With manufacturing plants at Bloomfield and Union, New Jersey, has announced a new branch office at 149 New Montgomery Street, San Francisco. This will provide greater service to distributors and to the professions, it being a complete unit with trained personnel and adequate stocks.

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POSTAGE STAMPS AS A MODE OF TRANSMITTING BACTERIA*

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The licking of postage stamps suggests the possibility of transmitting infectious bacteria capable of producing disease. Interest in collecting stamps has increased until at the present time Lybarger[1] estimates there are eight to ten million philatelists in the United States. This hobby is not limited to any social, economic or age group. The hazard of infection, if it exists, would be greatest to the philatelist. A review of the medical literature of the past twenty years as well as communication[2] with the U. S. Postal Authorities reveals that this possible route of infection had not been investigated.

In an effort to evaluate the possibilities of transmitting bacteria on the backs of used postage stamps it was necessary to determine three things:

I. Whether or not the gum on postage stamps contained germicidal properties;

II. If pathogenic organisms could be cultured from the solution in which stamps had been soaked free from envelope corners;

III. If pathogenic organisms could be cultured from stamps after they had been licked by patients known to have an infectious disease capable of being transmitted through sputum.

I. *Method:* One hundred mint stamps were obtained from the Post Office Department. The gum was dissolved from these stamps in 50 c.c. of saline solution. A bacterial suspension of staphylococcus albus was prepared, using Hopkins' method of counting bacteria. This suspension was standardized so that each cubic centimeter contained approximately 10,000 organisms.

Ten cubic centimeters of the gum solution was placed in each of four sterile tubes. As a control 10 c.c. of sterile physiological saline was placed in a fifth sterile tube. Into each of the five tubes there was placed 0.1 c.c. of the bacterial suspension. All were incubated for one hour in order to permit the germicidal effect of the gum solution to occur if any were present.

Poured plates of nutrient agar were prepared by adding 1 c.c. of solution from each tube containing gum solution to each of four plates. A similar plate was prepared from the control saline solution. These were incubated at 37°C. for 96 hours. They were examined daily.

Results: At the end of the period of incubation there was only one colony per plate containing the gum solution. There were 25 colonies on the control plate containing no gum solution.

II. The most common procedure of cleaning and handling stamps, as practiced by the philatelist, consists of soaking the used stamps free in a basin of water. This was duplicated in the following study.

Method: Tap water (500 c.c. each) was placed in two bowls. The water from both bowls was cultured for aerobic and anaerobic organisms.

Nineteen unselected stamps from foreign countries were cut from their original envelopes leaving attached only that portion of the envelope which was under the stamp. Most of these stamps were issued by Japan between the years 1890 and 1900. These were placed in one bowl. Nineteen unselected stamps issued by the United States Postal Department during 1943 and 1944 and prepared in the same way were placed in the second bowl.

Each bowl was covered to exclude the possibility of air borne contamination. After fifteen minutes all of the stamps had soaked free from that small part of the envelope to which they had been attached. The fluid from each bowl was cultured, then centrifuged and the sediment of each stained and studied. The sediment obtained from each bowl was cultured as follows:

1. Broth for aerobic organisms
2. Brewer's media for anaerobic organisms
3. Lowenstein's slants for tubercle bacilli
4. Loeffler's media for diphtheria bacilli.

All cultures were examined finally at the end of 96 hours except those for tubercle bacilli. These were incubated for 8 weeks.

Results: 1. Cultures taken from the water in both bowls prior to soaking the stamps were all negative for any organism.

*From the Bacteriological Laboratories of Jefferson Hospital, Philadelphia.

1. Lybarger, Donald F., President of the American Philatelic Society: Personal communication through Mrs. Eugene Klein, of Philadelphia.

2. Block, Ramsey A., Third Assistant Postmaster General, U. S. Post Office Department: Personal communication.

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2. Smears from the sediment of each bowl following the soaking of the stamps showed a few clumps of gram positive cocci. No acid fast or other bacilli could be found.

3a. In the culture tubes containing plantings from the bowl of foreign stamps, a heavy growth of staphylococcus albus was obtained at the end of 24 hours.

3b. In the tubes containing plantings from the bowl of American stamps there appeared a very light growth of staphylococci at the end of 48 hours.

4. There was no growth of Corynebacterium diphtheriae on Loeffler's special media in either instance.

5. After eight weeks of incubation there was no growth of tubercle bacilli on the Lowenstein's slants.

III. Because it is estimated that there are approximately 500,000 active cases of tuberculosis in the general population of this country (Dublin[3]) and there is little likelihood of the above small group of stamps containing a stamp which had been licked by a person with active pulmonary tuberculosis, nineteen unused stamps were sent to a sanitorium* for tuberculosis patients.

Method: The nineteen patients with active pulmonary tuberculosis had positive sputums ranging in the Gaffky Scale‡ from G-3 to G-9. All had far advanced tuberculosis with cavitation and were clinically toxic. Each patient was given one stamp to lick and affix to a card. These were sent as first class mail from the sanitorium to the Jefferson Hospital. They were three days in transit. The corner of each card with its stamp was cut off and placed in a separate sterile Petri dish which contained 5 c.c. of 6% sulfuric acid. This strength acid was used in order to kill all organisms other than the tubercle bacilli according to the method of Corper and Uyer[4]. The fluid from each dish was individually centrifuged in sterile tubes. Smears from the sediment of each tube were stained. The sediment of each tube was streaked on slants of Lowenstein's medium. These were incubated at 37°C. (98.6° F.) for eight weeks. The residual sediment from each tube was placed in a common container, was centrifuged, and smears and cultures taken.

Results: 1. The stained sediment showed no acid-fast bacilli.

2. No tubercle bacilli grew after eight weeks incubation.

3. The combined residual sediment from all tubes showed no acid-fast bacilli on either the stained smear or on culture.

CONCLUSIONS AND SUMMARY:

1. The gum on U. S. Postage stamps contains no germicidal properties. However, it has slight bacteriostatic properties, at least for the staphylococcus albus.

2. The staphylococcus albus, a common inhabitant of the nose and throat can withstand drying for long periods of time. A growth of this organism was obtained from stamps (Japanese issue) and from recently issued American stamps.

3. Tubercle bacilli were not cultured from stamps licked by patients known to have active pulmonary tuberculosis. Previous sputum tests of these patients showed as many as one hundred tubercle bacilli per microscopic field. Stained smears of the centrifuged sediment obtained from the back of each stamp also failed to show acid-fast bacilli.

4. All cultures for other organisms, both aerobic and anaerobic, as well as for diphtheria bacilli were negative.

5. This study would indicate that there is little danger of the common use of postage stamps playing an important role in transmitting infectious diseases.

NOTE: Appreciation is acknowledged to Miss Betty Dellette for assistance with the technical procedures.

Jefferson Hospital.

3. Dublin, Louis I., Metropolitan Life Insurance Company: Quotation from the National Tuberculosis Association; Personal communication.

*Piedmont Sanatorium, Burkeville, Va.

‡Gaffky III represents 1 tubercle bacillus per oil immersion microscopic field. Gaffky IX represents 100 tubercle bacilli per oil immersion microscopic field.

4. Kolmer and Boerner: Diagnostic Bacteriologic Methods, Second Edition, Appleton-Century Company; Pg. 483.

XUM

THE VALUE OF MASSAGE IN RHEUMATOID ARTHRITIS

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Rheumatoid arthritis is a general disease, and its etiology is unknown. It is progressive and is characterized by marked changes in the joints, muscle spasm, fatigue, and pain. There is no specific treatment, but effort is made towards overcoming the fatigue and alleviating the pain. The source of most of the pain is probably the muscles. Muscular inflammation with spasm is always present. It is usually mild with a scant exudate, but it may be severe with an abundant exudate.

The myositis that accompanies chronic rheumatism and chronic gout is characterized by a generous cellular exudate which soon produces induration and requires much treatment for its dissipation; on the contrary, in the myositis of rheumatoid arthritis, there is a more or less non-cellular exudate, which is circumscribed and more easily dissipated. The muscles seem especially sensitive and with the slightest infiltration are subject to painful spasm. Pain is a great factor and probably the greatest factor in undermining the patient's health and morale. Skillful and understanding massage will keep the pain in abeyance and thereby add the greatest boon to the patient's welfare.

In every spastic muscle, there are one or more tender spots. These are areas of infiltration, and, if they are rubbed out, the spasm is relaxed and the pain relieved. The number of treatments required for relief varies with the amount of exudate.

Unfortunately, massage is not ordered with the idea of relieving pain, and it is not directed to the infiltrated muscles, but it is prescribed solely as an invigorating agent. As a result, the patient receives a light effleurage which leaves the pain untouched.

The history of a patient seen recently may explain more clearly the need for specific instructions in ordering massage: A woman with pain in her right neck, under the advice of her physician, received daily treatments of infra-red light and massage for two weeks without relief. This was a case of myositis, and a circumscribed area of infiltration was found high up in the neck. One massage treatment was sufficient to soften the exudate and relieve the spasm and pain. The doctor's prescription was correct unless he omitted proper instructions. The masseuse failed to give relief, either from lack of instructions or lack of training.

If massage is to be successful in this disease, the masseur or masseuse must be familiar not only with the technique but must be able to distinguish between the normal and the diseased tissue.

Every physician treating this disease should be able by palpation of the muscles to discover any pathology and should know enough about the function of massage to give proper instructions to the operator. As long as general massage is ordered without specific instructions to the operator relative to the pathology, massage will not have the place in the doctor's armamentarium that it deserves.

An examination of a patient with rheumatoid arthritis is not complete until the muscles have been palpated and the infiltrated areas noted. The operator is now directed to treat only the diseased muscles noted in the examination.

The frequency of treatment (daily or three times a week) depends upon the vitality of the patient. Treatment is discontinued when the muscles are restored to normal.

If any muscle is found acutely inflamed, massage is postponed and moist heat is applied.

The form of massage used to dissipate the infiltrated areas is classified as friction or pressing and consists of the use of the tips of the three middle fingers or thumb, making gradually increasing pressure and applying circular movement. This is kept up until the operator feels the tissues give or relax, which means the treatment is effective. Whether the operation is to be carried further at this séance will depend upon the judgment of the operator. At this stage, it may be desirable to finish the treatment with effleurage and kneading (petrissage).

Although contrary to custom, we use massage over the joints, taking care not to injure the synovial membranes. Multitudes with this disease are groping. They feel they have been assigned to the scrap heap. They are forever grateful to any physician who will offer them hope and relief. The answer is physical therapy, and the agent of choice is massage. Proper massage in rheumatoid arthritis will help to keep the muscles free of exudates and thereby lessen pain and help to prevent contractures and make for a longer life of activity and freedom from complete invalidism.

EXPLORATION OF CYSTIC AND SCLEROTIC OVARIES AS A MEANS OF PRESERVING THEIR FUNCTION*

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Functional inadequacy of the ovaries arising from cystic and sclerotic disease is extremely prevalent. In fact, it is the capital source of symptoms which constitute a large fraction of female indispositions, especially those translated into variations of cyclicity such as bleeding too much, too little, too often or not at all. The emotional complexes, occurring independently or in association with these deviations, are sequelae, certainly familiar and usually somewhat trying to every clinician. The tremendous use of synthetic sex hormones for supplemental as well as replacement therapy emphasizes the frequency and wide distribution of endocrine imbalances derived from incompetent ovaries, regardless of whether or not the original dereliction lies with them.

Exception may properly be taken to grouping cystic and sclerotic ovaries together. From the standpoint of etiology and pathology there may be distinctions which, when carefully scrutinized, are more than likely differences in the projection of the same processes. This is debatable but when the symptomatology and therapy are considered the similarity becomes apparent from their response to treatment, the chief interest of the present discussion. Ovaries that are normal in size, but affected by unerupted and regressing follicles, are found far more frequently than those with frankly cystic masses.

This communication describes an attempt to preserve the function of cystic and sclerotic ovaries by an exploration which begins generally at the ovarian hilum along the white line and is pursued throughout the entire ovary. Its purposes are to liberate vessels and nerves in the hilum strangled by the presence of atretic follicles and connective tissue through which they must pass to enter the ovary, and to give the whole organ an opportunity to adjust its intrinsic pressures. If a sufficient number of cells capable of elaborating hormones subsists, improvement in their trophic conditions should restore the metabolism enough to relieve the symptoms of ovarian inadequacy. The period of effective usefulness of such ovaries can thereby be prolonged and the question of castration need seldom be considered except in complete, not partial, inflammatory degeneration, when the ovarian parenchyma is entirely replaced by a benign tumor and, of course, malignancy.

The conservation of ovaries has been the objective of much research, and their all too frequent sacrifice has long been deplored. Except in the most phlegmatic, extirpation of these organs may quiet one group of symptoms only to create others. Many surgical measures have been tried to preserve them or their endocrine producing faculty but have met with little permanent success. Recently the problem has been attacked through procedures at the free border with more favorable results. These with some details of the historical background will be discussed in later paragraphs. The present inquiry is based upon a new conception of the pathology and approaches the question from a mechanistic as well as a hormonal standpoint.

A better appreciation of the anatomy of the normal ovary can be obtained from the following lengthy quotation than can be had from the standard anatomies. It is from one of the forgotten classics of medical literature: Arthur Farre's[1] article "The Uterus and Its Appendages" which contains the original description of the white line. This structure, heretofore only occasionally mentioned, may have much more significance than has been attributed to it.

"Component parts: The ovary is composed of, 1st, protecting parts, or tunics; 2nd, a parenchyma, or stroma, in which they are imbedded; 3rd, the proper secreting structures, in the form of closed sacs or vesicles, containing the ova; 4th, vessels and nerves.

"1. The Protecting Parts or Tunics.—These are two in number, and correspond precisely, both in structure and derivation, with the analogous coverings of the testis.

"The peritoneal covering constitutes the outermost of these coats, and consists of the layer of peritoneum derived from the posterior lamina of the broad ligament, which serves to connect the ovary with

*Read before the Staff of the Sinai Hospital, Baltimore, Md., October 26, 1944.

the parts adjacent. Except at its base, the ovary is so closely invested by this peritoneal lamina, that no effort with the scalpel will suffice to detach it from the tunic beneath. This intimate union, however, of the two coats ceases at the base of the ovary, where a white, irregular, and somewhat elevated line is observed on either side, extending in a horizontal direction, and rising higher on the anterior than on the posterior surface of the gland. In its intimate texture this covering of the ovary differs in no respect from the peritoneum covering the viscera generally.

"The tunica albuginea, or tunica propia, constitutes the special or proper covering of the ovary. It serves to give form and solidity to the organ, and to protect the ovisacs and ova from injury. This coat has a nearly uniform thickness and forms a complete investment for the ovary, except at its lower border, where the fibres are either very thinly scattered and interlaced, or are altogether wanting, leaving a longitudinal space termed the hilum or vascular fissure, and extends along the entire base of the ovary.

"The tunica albuginea has been commonly regarded as a more condensed portion of the stroma, or parenchyma, of the ovary; but from this it is readily distinguished, not only by its clear white color, and dense and almost cartilaginous hardness, but also by its microscopic characters. On account of its extreme toughness, this tunic is not very easily separable into fragments sufficiently minute for microscopic examination. But when small portions have been so obtained, the margins of the fragments exhibit numerous close-lying and irregularly arranged fibres of developed connective tissue, projecting from a dense, structureless matrix interspersed with granules, which serves to connect the fibres together, and to which apparently is due, in a great measure, the peculiar toughness of this membrane, while its remarkable whiteness is explained by the much smaller number of blood-vessels that it contains as compared with the general parenchyma of the ovary. The tunica albuginea, therefore, is not merely a more condensed form of the ovarian stroma, but appears to result from a development of tissues which exist in the stroma in an elementary or embryonic form, as well as from a more close conjunction and blending of those tissues.

"2. The parenchyma, or stroma, constitutes the proper tissue of the ovary. It lies immediately beneath the tunica albuginea, and fills up the whole of the intermediate space between the ovisacs, to which it acts as a germ bed, protecting the ova from injury, and serving for the conveyance of blood-vessels to the ovisacs. This tissue is sometimes of a pale-pink, but more often of a bright-red color, from the large number of blood-vessels which it contains, whose arrangement proceeding from within, and radiating outwardly in all directions, gives to this tissue, when viewed by the naked eye or by a common lens, the appearance of being formed into bundles or laminae.

"The microscope, however, serves to resolve this tissue into its true elements. When so examined, the stroma is found to be composed mainly of blood-vessels, to which a great part of its strength and toughness is due, the intermediate spaces being filled up by a fibrous structure not separable into bundles, like ordinary connective tissue, and having no distinct fibrillar arrangement, its chief elements being single white fibres of ordinary connective tissue, numerous fusiform embryonic fibres, and elliptical and round cells or granules, the whole being coherent and strongly united together.

"Vessels and Nerves.—The ovary derives its supply of blood chiefly from the ovarian (spermatic), but in part also from the uterine arteries. So free, indeed, is the communication between these vessels, that the organ may be equally well injected from either source. The communication is effected chiefly by means of a branch of the ovarian artery, which passes inwards to inosculate with a terminal branch of the uterine artery, this anastomotic branch being occasionally so large as to constitute the principal source of supply of the ovary. The terminal vessels are conducted to the lower border of the ovary between the folds of the posterior duplicature of the broad ligament, where they lie in parallel lines, and are readily distinguished by their tortuous or spiral form. Having entered the base of the organ, they spread out into those numerous ramifications which penetrate every part of the ovarian stroma, and give to this structure its peculiar fibrous aspect. From their extreme branches the blood is returned by the veins, which pass to the base of the organ, where they are very numerous. They form, near the ovary and between the folds of the broad ligament, a plexus termed the ovarian or pampiniform plexus, the vessels of which communicate also with the uterine plexus. Valves are found in the ovarian

veins only in exceptional cases."

It is my thesis that it is possible for an ovary with poor function to simulate the normal ovary and its true state can be discovered only by an investigation of its interior. This situation occurs far more frequently than is commonly supposed. There are many variables affecting the ovary, among which are pregnancy, age and the alterations accompanying the menstrual cycle in which follicle changes play such a large role. The complacent popular comprehension of the normal ovary is unwarranted because it does not take into consideration the deceptions engendered by the presence of an enlarging follicle that does not reveal itself in any way. It must be remembered that a follicle can develop at any location in the ovary. If this happens between the two dense layers of the tunica albuginea at the white lines, the consequences of the expansion and persistence of an abnormal follicle may be far-reaching. The distinction lies in the differences between the normal and abnormal follicle of which the following description[2] by Farre is unsurpassed.

"It may be asked, therefore, in what respect does the normal differ from the abnormal state, and by what characteristics may the one be distinguished from the other? It appears to me that Rokitansky, in the account which he has given of hyperaemia of the Graafian follicle, has included under one head both the natural and the morbid conditions; for his description will very well apply to the rising follicle, in its second stage, when the escape of blood into the cavity has been shown to be a normal, and in some animals a constant occurrence. The presence, therefore, of blood within the follicle for the reasons already fully given, must not be regarded as necessarily affording evidence of a morbid state. There are, however, certain peculiarities in the condition of the unhealthy follicle, by which it may be distinguished from that which is natural. The natural follicle, when preparing for dehiscence, is always near the surface, and often projects considerably above the level of the ovary. Its coats are unequally thick; the thinnest portion being always found at the most prominent point of the follicle. There is considerable vascularity about this point, plainly visible externally, and here the process of attenuation and absorption continues to be progressive until the sac spontaneously ruptures. The walls of the follicle are at this stage of a bright yellow color. The liquor folliculi is either clear and limpid or intermixed with blood, or the centre of the sac is filled by a coagulum, which is at first bright red, and afterwards becomes pale, and at length nearly white. The coagulum may adhere to the walls, and undergo fibrillation and subsequent conversion into a solid body, or into a dense white membrane, or it may be rapidly absorbed.

"On the other hand, the morbid follicle, although it may not exceed nor even equal in size that which is passing through its normal changes may yet be distinguished by many characters which are the converse of those just described. The morbid follicle is often not peripheral but is more or less central in its position in the ovary. It may attain to the size of one-third or one-half of the ovary, without necessarily causing any distinct prominence above the surface (especially when occurring singly). The walls are equally thick, and exhibit at no part any evidence of attenuation or absorption. No preparation for rupture is indicated externally by any peculiar arrangement of vessels, or by any marked increase of vascularity. The walls do not exhibit the remarkable yellow color nor the cerebral foldings characteristic of the advancing normal ovisac, but the tissues of which they are composed are simply those of the undeveloped Graafian follicle. The contents of the sac are neither the clear liquor folliculi, nor the bright clot, nor the decolorized fibrin, but generally a collection of dark coffee-ground matter, resulting from the admixture of a quantity of decomposing blood corpuscles and fragments of membrana granulosa intermixed with a dirty fluid. On washing out these contents, the walls of the cyst, if the ovary has been injected, are seen to carry numerous vessels, irregularly arranged, but never presenting that rich network of capillaries which is visible after a successful injection of a healthy ovisac progressing towards rupture, especially in those cases where the quantity of yellow oil is not so great as to obscure these vessels altogether.

"By these characteristics the morbid ovisacs may generally be distinguished from those which are healthy. There is enough of similarity between them to prove their identity or origin, and enough of dissimilarity to their divergence from a starting point; the healthy follicle proceeding onward through a course of different changes, which have been already fully described; the morbid follicle exhibiting an apparently unlimited power of growth and deformity, such as will be presently more fully noticed.

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"The morbid follicle occurs as a single cyst in the midst of otherwise healthy tissues. Although occupying more than one-third of the entire ovary, it scarcely disturbs the even outline of that organ. Its coats are of uniform thickness throughout. There is no attenuation nor preparation for dehiscence at any particular spot, nor external sign of increased vascularity in one point. But the walls of the follicle contain numerous vessels, distributed nearly equally over their surface. The cavity is filled with loose flocculi of a dark chocolate color, consisting of decomposing blood clot mixed with patches of membrana granulosa. The walls of the follicle are not yellow, and contain no oil globules. They are slightly thicker than those of the healthy follicle. Their component tissues are precisely those which have been already described as characterizing the ovisac in its normal condition.

"Such a condition may, for want of a better designation, be regarded as hyperaemia of the follicle, or it might perhaps be more appropriately termed hypertrophy of the follicles; but in whatever light it may be regarded, it constitutes one of the early stages of those enormous growths, of which more will be said hereafter."

The follicle in an ovary, destined for development, is, as far as I am able to determine, ordained purely by the elements of chance and the accidents of nature; although it may be a definite selective process of which absolutely nothing is known. When one does enlarge between these tough layers at the hilum, there is little or no opportunity for it to complete its evolution to successful maturation. Meanwhile, it can become a menace to the whole organ, not only because of impairment to the surrounding circulation and innervation but also by creating a predicament in the ovary, because of its unyielding capsule, that is analogous to the situation in the glaucomatous eye where the increase in pressure endangers the nourishment and function of every cell. Thus the ovary contains a mechanism capable of consummating its own destruction through a normal, not a pathological, process.

The symptoms of ovarian dysfunction in the series of cases to be presented may be divided into two groups: the first comprising changes and irregularities in the menstrual cycle, and the second, complaints of a neurogenic nature, including tension, irritability, and agitation. These latter symptoms were utilized to determine the suitability for operation in some of the cases by observing the relief obtained from the administration of hormones during the appropriate phase of the menstrual cycle. If the psychotherapeutic response was adequate and the patient not too old, the operation was done. Pain, tenderness, masses and sterility were considered secondary and, although their importance was not minimized, the primary object of the operation was to restore the elaboration of hormones in order to eliminate the necessity for imitating, by artificial means, the normal human endocrine physiology. Perhaps further experience will disclose the value of vaginal smears and endometrial biopsies in the criteria for this procedure.

Thirty-nine patients have had this operation. In addition, for the purpose of gaining experience and improving technique, twenty-two more ovaries were explored in patients operated for other conditions, making a total of ninety-eight ovaries which have been examined in the living subject. Of the thirty-nine cases, thirty have been done too recently to arrive at a correct appraisal of the result. I feel optimistic for their success because of the noticeable improvement in the neurogenic symptoms particularly, which I am hoping will be neither transient nor merely the evanescent elation of convalescent patients. This improvement parallels the changes observed in individuals in whom the deprivation of sex hormones is reduced by suitable therapy. Among these are two women in whom one ovary and both tubes had been removed some years before. The results of exploring the remaining ovary have been equally gratifying from the endocrine viewpoint. Their permanence, however, must be considered more doubtful.

The details of the first nine cases are presented in chronological order: All the patients were white and when suspension of the uterus was done, the Baldy Webster method was used.

Case 1. Mrs. E. G., age 22, operated November 6, 1941, complained of nervousness, irritability, premenstrual tension and discomfort in both inguinal regions with dysmenorrhea severe enough to cause her to go to bed for two or three days. The menstrual flow was scanty. Pelvic examination revealed a small, sensitive uterus, moderately retroverted, and tenderness in both adnexal regions without masses or thickening. At operation the uterus was infantile and retroverted. The ovaries, which were very small, had wrinkled white surfaces, and single thick

white lines were so prominent along the bases as to suggest that here might be a source of trouble. These were resected with difficulty and there was much bleeding. The uterus was suspended. There was a noticeable improvement in the dysmenorrhea, sedatives and bed rest no longer being required and irritability and tension diminished. Bleeding at menstruation was a little more profuse, and the discomfort in the inguinal regions disappeared.

Ordinarily the uterus and ovaries in this patient would have been removed since there had been no response to any therapy before operation and they continued to be a constant source of disability. My attention was sharply attracted to the raised white lines about one-eighth of an inch in thickness just a little below the hila of the ovaries, and I decided to remove them. It was accomplished by exercising bits of it at a time, certainly not a happy or reliable method as the ovaries were nearly destroyed during the process. The nature of the white lines prompted this investigation.

Case 2. Mrs. V. E. B., age 26, operated March 14, 1942, complained of irregularity, menorrhagia, backache, severe premenstrual tension, and sterility. She had been married five years and never practiced contraception. Pelvic examination revealed that the uterus was retroverted with moderate tenderness in both adnexal regions. At operation the ovaries were small with smooth surfaces and no follicles could be seen at the free border. The white lines were prominent and removal of these uncovered a series of small atretic follicles which were nearly uniform in size. The uterus was suspended. For six months after operation the periods were regular, backache and pelvic discomfort disappeared and premenstrual tension was much less severe. The period for the seventh month did not arrive and when last seen she was a little over six months pregnant.

Case 3. Mrs. C. R. G., age 29, operated July 21, 1943. This patient had attacks of severe abdominal pain, lasting two to three days, occurring between periods at about the time for ovulation. The pain originated low in the inguinal region and radiated to the hip and leg. It would occur on either side but more often on the right than the left. Examination revealed the uterus in normal position with extreme tenderness on the side affected. She had two children, so operation was done without too much emphasis on conservative surgery. The ovaries were small and their whole surface uniformly white, but pitted by many depressions. The white lines were clearly defined and their resection was followed by decapsulation. As this was easily accomplished without too much hemorrhage, it was decided to take the risk of leaving these organs in. Since operation she has had no episodes of pain and states she feels more comfortable during her periods than ever before.

Case 4. Mrs. A. E., age 21, operated October 5, 1943, complained of severe backache, dysmenorrhea and menorrhagia, and premenstrual tension. The uterus was completely retroverted with some tenderness in both adnexal regions. At operation the ovaries were of normal size but had thickened capsules at the base. The hila were explored but too much bleeding was encountered to continue, so the uterus was suspended and the abdomen closed. The backache has disappeared and dysmenorrhea slightly improved but the extreme premenstrual tension and menorrhaghia remain about the same. I believe the operation was inadequate and that a much better result would have been obtained with the technique which has since been developed.

Case 5. Mrs. W. A. T., age 33, weight 154 pounds, operated January 10, 1944, noticed that her periods instead of lasting four to five days, were becoming shorter, ending in two to three days and that she was having occasional flushes. Her history included an increasing number of episodes of irritability and crying spells. Administration of estrogen completely eliminated her neurogenic symptoms and flushes. The uterus was slightly enlarged and retroverted with some tenderness in both adnexal regions. At operation both ovaries were slightly larger than normal and exploration through the hila was done through unusually thick and tough tunics by the method to be described. In the right was a large, firm corpus albicans which was adherent to both surfaces of the ovary with thick bands of fibrous tissue, and in the left, a series of small atretic follicles under great pressure, which must have been interfering with the metabolism of this ovary. The uterus was larger than normal but was not disturbed. The period after operation lasted four days and her weight one month later was 146 pounds. The succeeding period was five days. Meanwhile, the flushes disappeared and her weight reduced to 123 pounds by October 1, 1944, although her appetite and intake of food increased.

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The symptoms of estrogen deprivation completely disappeared. She was very enthusiastic about the outcome of her operation and described herself as returning to the condition and sensations of well-being she had when about the age of twenty to twenty-five.

Case 6. Miss H. M., age 19, operated February 18, 1944, complained of severe dysmenorrhea, backache, and premenstrual tension. Because of complete retroversion of the uterus, operation was advised. The ovaries were prolapsed along with the uterus. It was suspended and the ovarian hila explored. Externally the ovaries seemed to be normal but the white line was much thicker and tougher than it at first appeared and numerous follicles at various stages of development were uncovered. The backache, dysmenorrhea, and tension have disappeared and there is a general sensation of a feeling of fitness that she never observed before. Perhaps I may be accused of bias, but, according to my experience with suspensions, I feel that it alone would not have accomplished these results, especially the improvement in subjective sensations.

Case 7. Mrs. G. V., age 27, operated February 19, 1944, had not menstruated for nine months and was not pregnant. Her husband was soon to return from overseas and she was anxious to menstruate so as to increase the possibility of conception. Hormonal therapy was unavailing. Examination revealed no pathology, but her right tube had been removed along with her appendix through a small rectus incision several years before—she did not know why. At operation the left tube, uterus, and ovaries appeared to be normal, but on exploration of the hila the ovaries immediately distended to nearly twice their original size. The cause of this expansion was not due to hemorrhage into the organ but seemed to be the result of the sudden release of the arterial circulation. She menstruated while in the hospital and has continued to be regular with periods averaging four to five days and a normal amount of flow.

Case 8. Mrs. B. T., age 21, operated March 13, 1944, menstruated only twice a year since puberty. The last period, occupying only one day, took place in January of this year and she was sterile after two years of marriage. Her uterus was infantile but normal in position and no tenderness or masses were noted. At operation both ovaries were normal in size but their surfaces were uniformly thick and dense, resembling testicles in appearance. The white lines were visible but not prominent and when opened, the ovaries collapsed as a quantity of clear fluid under pressure escaped, apparently from a follicle occupying almost the whole ovary. Very little bleeding occurred. It was embarrassing to have left what seemed only the shell or capsule of these organs but since they were better than nothing, the abdomen was closed. On March 27, a period began, which continued for five full days, and on May 20 she complained of nausea and intense soreness in both breasts. When seen on October 20, 1944, she was in about the seventh month of pregnancy.

Case 9. Mrs. J. N. T., age 33, operated May 24, 1944, first came to my office in August, 1943, with her nose bleeding and violent headache. In accordance with the theory I have advanced regarding spontaneous hemorrhage,[3] she was given 1 mg. of estrogen and the headache and bleeding subsided in about an hour. She had had many episodes of epistaxis, averaging three a month for the last five years, was nervous, tense, chronically fatigued, and frequently depressed. No abnormalities were found on examination, but the symptomatology indicated deprivation of estrogen. This was administered and her symptoms improved greatly until operation was suggested, with the hope that the estrogen capacity of the ovaries could be restored. Operation was done just at the close of menstruation for the purpose of giving the estrogen producing cells their greatest opportunity for production. The ovaries were found to be of normal size, shape, and consistency, but exploration of the hila disclosed many atretic follicles and fibrosis sufficient to strangulate the circulation. Four days after operation she complained of an intense offensive vaginal odor which was described to be like that she was accustomed to have after the menstrual periods of her early twenties. This undoubtedly was due to increasing activity in the vaginal mucous membrane as a result of enlarged estrogen production as she has had no epistaxis or headaches and her neurogenic symptoms have improved remarkably.

INDICATIONS FOR OPERATION

One naturally hesitates to advise a patient to undergo the hazards, discomforts, and expense of an operation on so intangible a basis as an emotional disturbance which neither endangers life nor is nec-

essarily due to an endocrinopathy. The therapeutic armamentarium should be exhausted before any suggestion of an operation is made. In addition, the almost total inability to predict the condition of the ovaries, especially with reference to the retention of intact ovarian cells, puts the ultimate prognosis on such a doubtful plane as to make the whole procedure unattractive to both surgeon and patient alike. Yet recently developing emotional disturbances can become uncomfortable enough, with the newly depressive experiences and radical changes in the subjective sensations associated with them, to drive the patient to her physician for relief, and that fact alone can be utilized as one of the indications as in Case 5.

Considerable experience, insight, and the capacity and inclination for the analysis of emotional states, are necessary to distinguish psychotic conditions, situational conflicts, and inflexible personalities from the fretfulness, despondency, and explosiveness so commonly associated with imbalances of the sex hormones. This alone would require an extended discussion. Integration of many factors is required, but the decision is more often than not activated by the symptoms and signs which I have designated as secondary but carry sufficient weight in themselves to influence the verdict. These are sterility, displacements, masses, menstrual abnormalities, and other discomforts usually attributed to disorders of the female sex organs. Moreover, the test I have mentioned, which embodies the response to hormone therapy, can be used when the emotional conditions alone are to be judged, and, carried further, using hormones either singly or in combinations and sequences, may determine if the various dysfunctions of the menstrual cycle are likely to benefit from ovarian preservation.

Once inside the abdomen, the decision to explore the ovarian hilum is not difficult to make. Regardless of whether the ovary is small, wrinkled, and nodular, or is of normal size and consistency, the thickness of the cortex or any large difference in density between the surfaces above and below or at the white line is one determining factor. When palpation of the ovary between the thumb and first two fingers suggests an increased internal pressure the hilum should be opened. Finally, if careful inspection of the cortex shows no evidence of recent rupture or preparation for rupture of a follicle, that ovary should be investigated regardless of the internal pressure or the absence or presence of cortical sclerosis. It is useless to try to locate unruptured follicles or corpora albicantia through the capsule by palpation. Sometimes this can be done but it is too unreliable. When the ovary does not feel tense and there are numerous follicles of different sizes present, especially along or near the free border, there is no reason to explore. The white line marks the transition of the usual peritoneal endothelium of the mesovarium into the cylindrical germinal epithelium covering the exterior of the ovary that appears dull and without the lustre characteristic of serious surfaces. It is along this line that special attention should be directed.

Exploration of the other ovary is indicated also when a large cyst is present in one of them. For instance, a large chocolate cyst about eight inches in diameter was resected from the left ovary of a 29 year old white girl while the right appeared externally to be normal. Nevertheless, a beginning cyst of the same type was found in its hilum also which undoubtedly would have developed to require another operation. Perhaps other cysts may come into existence but then again they may not. Meanwhile, she will have the opportunity for conception so earnestly desired. In addition to removing the large cyst, the hilum of that ovary also was explored and numerous small follicles were discovered.

One is often chagrined, upon entering the abdomen, at finding little to account for a syndrome that seemed to be referable to the reproductive organs. Moreover the symptoms of a concealed tense follicle often simulate those of other diseases, particularly appendicitis in girls of the teen age. In such instances the answer to an obscure and perplexing predicament may sometimes be found in the ovary which should be investigated under these circumstances regardless of any other indications. Exploration of the ovary takes little time and is practically without hazard.

PATHOLOGY

The gross pathology consists essentially of follicles in various stages of development and regression occurring in otherwise healthy tissues which, when not peripheral, often attain a large size "without attenuation or preparation for dehiscence and scarcely disturbing the even outline of the ovary". Others that are more peripheral can enlarge until the ovary seems a mere appendage of the cystic conformation.

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The contents of these cysts vary from a dark thick brown material through light yellow to a clear white fluid, but is it the cyst itself, not the character of the contents, which affects the ovary. In the living subject the effects on the circulation and internal pressure of the organ can sometimes easily be seen given to the circulation; but more frequently, unless large cysts are present, no alterations in size and shape are observed, and, instead, the follicles and the fibrosis are indicative of the poor conditions in the hilum that can require several months after operation to become relieved.

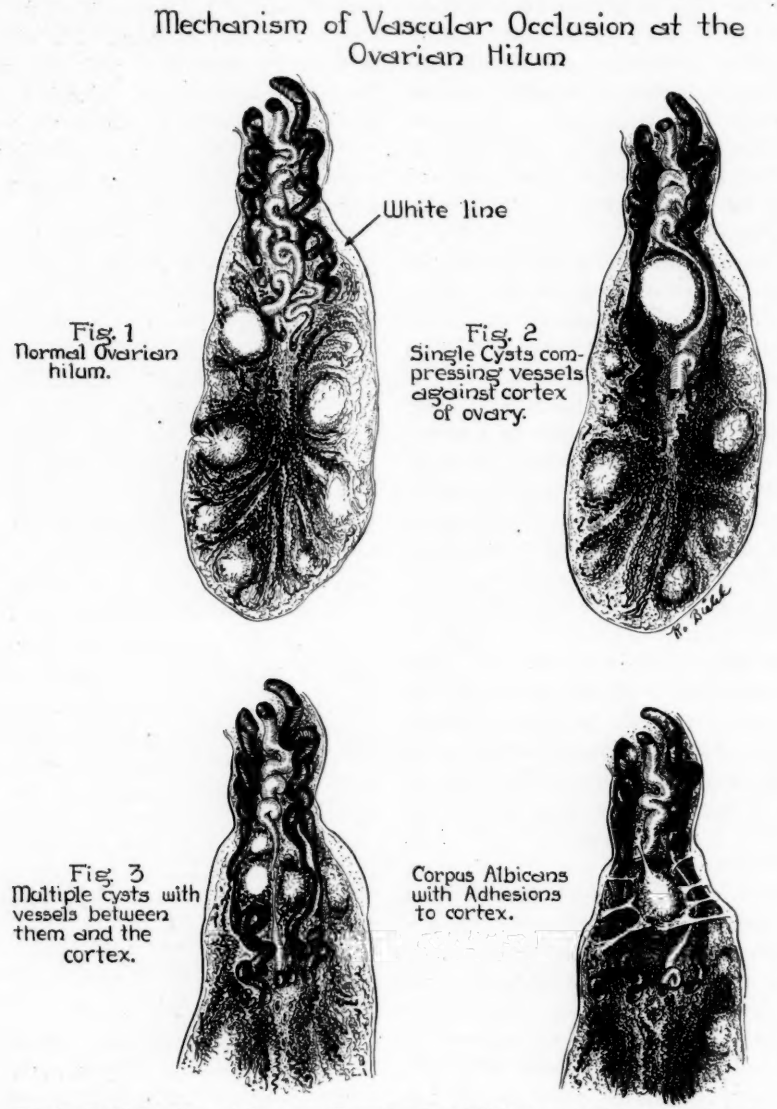
Mechanism of Vascular Occlusion at the Ovarian Hilum
White line
Fig. 1
Normal Ovarian hilum.
Fig. 2
Single Cysts compressing vessels against cortex of ovary.
Fig. 3
Multiple cysts with vessels between them and the cortex.
Corpus Albicans with Adhesions to cortex.

Plate I.—Sagittal sections of the ovary illustrating how follicles near the hilum can affect the circulation without any indication of their presence on the surface.

with the naked eye when the hilum is opened. For instance, in Case 7 the gradual enlargement of these structures appeared convincing that relief was being

When the ovary is not enlarged, atretic follicles produce changes in three different ways. Upon exposing the ovarian stroma one large or a line of

small follicles of varying diameters and pressure may be found in the base, certainly without hope of ever maturing and in the meantime arresting and suffocating the vessels and nerves going distally to the remainder of the organ. Such follicles when they are tense can cause pain, although they do not always increase the total intra-ovarian pressure. They affect the tissues around and between them. Then, almost as frequently will be found one or more corpora albicantia which are hard, firm, and unyielding, surrounded by masses of fibrous tissue forming trabeculae between the two surfaces of the ovary and so extremely resistant to the dissecting knife that one wonders how a metabolism of such delicate nature can function below it. This condition can cometimes be detected externally through the presence of a large scar that often extends the whiteness of the ovary up onto the mesovarium and resembles the peritoneal scar over a peptic ulcer. Lastly, a large follicle may be present at either end of the base, which, since the internal components of the ovary are much softer than the outer, displaces and compresses the structures passing through the hilum to one side or the other without any indication on the surface that such a situation is present beneath it. Combinations and variations may be present, but they all indicate one fact: that the tough, inelastic, external coat of the ovary does not allow the deeply placed expanding follicles to reach the surface and forces them to exert pressure on every cell around them. Even should release eventually take place some damage may occur during such time as the growing follicle prevents the circulation from nourishing any part of the ovary. The peculiar, spiral arteries in the hilum may possibly provide for this contingency by elongating around the follicle like a stretched spring, but they can be effective for transporting blood only up to the limit provided by the space in which they are ultimately left to function. In the conditions herein described, this space is practically non-existent. Undoubtedly an optimum pressure for the maturation of the follicle must

Fig. 1.—Section across the spiral vessels at the level of the white line showing the rich blood supply. This ovary, removed elsewhere, was of normal size.

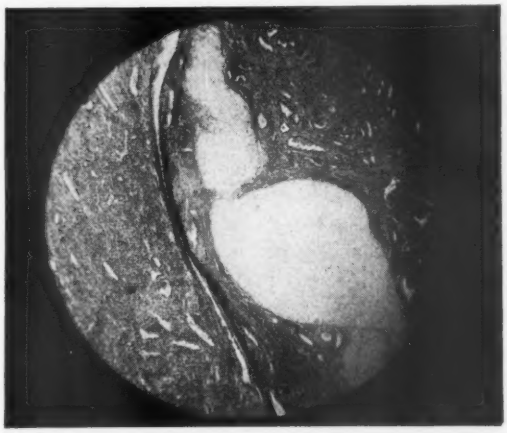

Fig. 2.—Section a little below the white line of the same ovary with a vessel curving around a regressing follicle.

Fig. 3.—Section at about the same level as figure 2, showing how the ovarian stroma conforms to the contours of follicle A. A regressing follicle is seen at B with an obliterated vessel above it at C. A large vessel D narrows until it disappears between the greatest diameter of the follicle and the cortex which is not shown. Note how this vessel is further affected by the follicle B which causes a small curvature in it.

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exist, above or below which proper ovulation does not take place, thus suggesting a plausible explanation for the occurrence of anovulatory cycles with the alterations in the endocrine sequence incidental to them.

The microscopic pathology confirms the effects of pressure on the vessels as they pass around a follicle, since the presence of one in the interior of the ovary materially affects the arrangement of the stroma, compelling it to conform to the contours of the cyst. In sections across the hilum extended vessels are rarely found because of their spiral nature, but beside a cyst immediately below, these have been lengthened and attenuated by its curvature to such an extent that they are straight and at

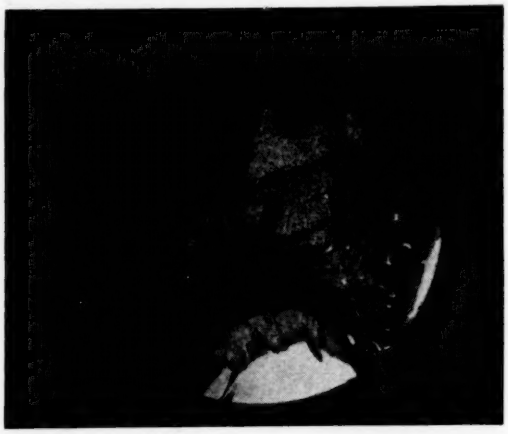

Fig. 4.—Section near the white line of another sclerotic ovary showing a corpus albicans between the cortex and another follicle. No vessels can be seen. This ovary probably could not have been preserved.

the greatest diameter of the follicle, the lumina, caught between the cortex and the cyst wall, are nearly obliterated. The remarkable suddenness with which the rich mass of vessels in the mesovarium dwindles at the level of the white line is thus accounted for. This must either temporarily or permanently interrupt the nutrition of large areas in the ovary, permitting the weeds of fibrous tissue to invade the garden of ovarian stroma. When a corpus albicans is in the hilum, bands of fibrous tissue reach out to the cortex on both sides, all forming with the regressing follicle a hard inelastic body across the hilum in which the vessels are enmeshed and occluded.

Further investigation will be required to support the validity of these opinions. Studies of injected specimens and serial sections, stained to demonstrate the various types of cells, should reveal much concerning the distortion of the entire circulation and innervation from the maturation of follicles at various positions in the ovary. Especially important is to determine if the vascular tree is versatile enough to adapt itself to the sequence of events within the ovary by providing a collateral circulation with sufficient rapidity and capacity, to supply the parenchyma affected by an enlarging follicle no matter where. This is not of great moment if the follicle is near the surface and either goes on to rupture or becomes a large cyst, but the continued effects of the presence of an unruptured or slowly regressing follicle beneath the cortex upon which it makes no impression may be quite another matter. In addition, the failure of these follicles to yield progesterone may alter the metabolism of the ovary itself. On several occasions I have had the clinical experience of noting the disappearance of ovarian pain and the apparent resolution of a palpable cyst after the administration of large doses of this substance.

What happens to an ovary after invasion of its coats is not known, as no one has had an occasion for re-examining these structures after the original laparotomy. Lynn and Maxwell[4] report dense adhesions after partial resection of the ovary, but that is a different procedure. The possibility of renewal of the fibrous coat cannot be denied although the result in Case 3 seems to disprove this.* Expansion of follicles in the same area is also probable, but if their maturation is unencumbered, no extension of the sclerotic process should occur. Estimations of the success of this procedure must as yet be based solely on the improvement of symptoms and on various manifestations of the maintenance of ovarian function.

ETIOLOGY

The etiology of ovarian inadequacy due to sclerotic or polycystic disease is more speculative than factual. An effort to determine that a correlation exists between ovarian activity and psychological processes has been made by Benedek and Rubenstein[5] but that it is a reversible reaction has not been fully demonstrated by students of psychosomatic medicine. Most of the structures of the body are functionally and organically affected through psychosomatic

*Twenty months after this operation she reported that she was pregnant.

mechanisms, so it is difficult to believe that the endocrine glands escape altogether. Certainly the development of fantasy life in the adolescent girl, the characteristics of her environment and the rich emotional and deep affective experiences associated with the intensification of her inner world must leave their mark upon the cellular components of the ovaries just as they do elsewhere. This is often manifested externally by disturbances in the menstrual cycle, such as amenorrhea, menorrhagia and intermenstrual menstruation brought on by the intense experiences of war, and, in an otherwise normal life, by factors enhancing the vehemence of individual feelings and mood changes which eventually mounts

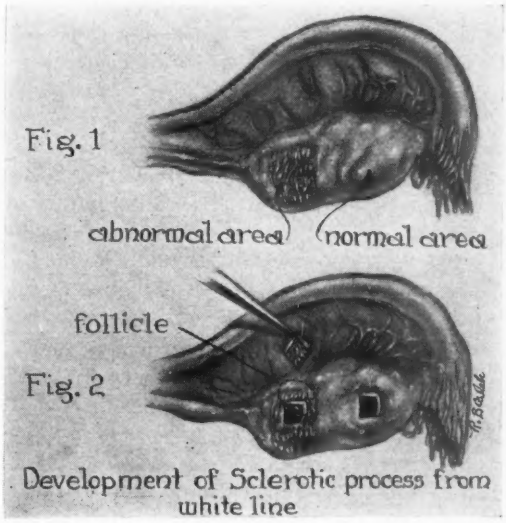

Plate II.—Ovary of 19 year old girl mistakenly operated for salpingitis and found to have appendicitis. Small squares of the cortex that were removed for section and the tense follicle beneath the abnormal area are shown.

to sustained or fluctuating emotional hypertension. Whether their effects can cause a functional disruption of the interglandular balance sufficient to derange the pituitary-ovarian correlation is, at present, a subject for conjecture. It seems more and more clear, however, that the impact of an hyperemotional psyche on the elaboration and correlation of hormones and the effect of hormones on the psyche can become a vicious cycle with such a crescendo that the co-ordination of both may be disorganized.

Another factor may be the tumultuous existence demanded of the cellular morphology of the ovary as contrasted with the relative peace and quiet attending the functioning of the other endocrines. The endometrium also is constantly alternating but is not exposed to the permutations to which the ovary is liable. In following the pituitary as the pacemaker of this endocrine synchronism, the ovary

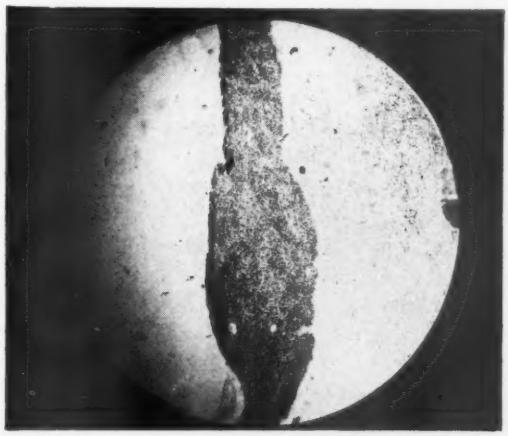

Fig. 5.—Section of normal cortex removed from ovary illustrated in Plate 2. It is normally thin and the cells are not packed. x 32.

alone undergoes comparatively violent changes which subjects it to the hazards and distortions incidental to the variating physical forces of expan-

Fig. 6.—Section of sclerotic area of this ovary taken at the same level but over a tense follicle. Note the comparative thickness and the closely packed cells. x 32.

sion and contraction impinging on the intervening parenchyma and on each other from separated areas in the same closed space. When the sclerosis is pronounced I question if any internal or external stim-

ulus is capable at this stage of having the power to insure the rupture or absorption of a follicle surrounded by such an inflexible and unyielding encasement, leaving the ovary unimpaired.

A clue to the more immediate problem of the formation of this encasement was furnished when a twenty year old girl was operated through a midline incision for salpingitis and found instead to have subacute appendicitis with the appendix deep in the pelvis. The ovaries were examined and the right was sclerosed for only half of its length. The thickening began abruptly at the white line, extended uniformly to the free border and medially ended just as suddenly at about the middle of the ovary. Small squares were removed from each part of the cortex at the same level and then the sclerotic part was opened at the white line where a tense follicle was found. In the sections the cortical epithelium seemed to be alike but the fibrous layer beneath the normal was much smaller in diameter and the cells much less closely packed than the other. Naturally without considering the endocrine and emotional factors, there is not enough ground here from one case for a conclusion. It does bring up the question of the reaction of the cortex to an abortive follicle, a matter so far entirely unconsidered. Thus, the character of the ovarian capsule, modified by its previous vicissitudes and trophic condition, may be just as important as the endocrine, emotional and positional factors in determining the future course of a follicle: if it is to maturate normally and rupture, become a large cyst, or enlarge to a certain point and do neither.

HISTORICAL BACKGROUND

DeWees,[6] in 1826, eloquently summarized the opinions of his time concerning the therapy of affections of the ovary which could not be successfully refuted today. In the chapter "Of Diseases of the Ovary" he states: "These bodies are more frequently diseased or disordered than the uterus itself; but neither the diseases, nor disorders to which they are liable, are of such dangerous consequence. They are, however, for the most part, more occult than the other diseases of the genital system, if we except those of the tubes. Hitherto no remedy has been discovered that has a decided operation on these bodies; consequently, they are very little under the control of remedies, whose operations are felt upon the general system or of those which may exert an influence on certain portions of it. It is probable that, during an active state of disease, as inflammation, the usual remedies for fever, or this local affection, may be availing, as bleeding purging, low diet, blistering, etc.; but here, perhaps, the power of the materia medica ceases; for no one instance, with which we are acquainted, would lead us to the conclusion, that any remedy has removed a disordered condition of these parts.

"They seem to be removed so far from the general sympathies of the system; so insulated in position; so independent in function; that the common agents for the removal or control of disease seem to waste themselves in unavailing attempts to influence their actions, or to modify their affections. Who flatters himself that he has removed a dropsy, resolved a scirrhus, or interrupted a suppuration in these bodies? We believe, if he be candid, none will confess he has. Little more than at present is ascertained, than that they are very liable to disease, and but very little susceptible of cure. But, must we so humble the powers of the healing art, as to declare, we never shall be master of their diseases? Certainly not. Advances are constantly making towards at least the improvement, if not the perfection, of the art; and we are now and then made acquainted with substances, which have a specific action upon certain tissues of the human body. The time may then arrive when we shall be in possession of a remedy whose agency shall be confined to the ovaries alone, or to similar organizations, if such there be in other portions of the system. But until then, unfortunately, the victims to affections of these important parts must remain contented with the solace which palliatives may afford."

Defeat has never been admitted for advances are being made constantly "toward the improvement, if not the perfection, of the art". Resection of the cysts was tried and abandoned about fifty years ago.[4] To wait in hopeful anticipation for a condition such as amenorrhea associated with inadequate ovaries to end spontaneously, suggests frustration instead of the more energetic solution of the intervention in Case 7.

About the turn of the century and for many years thereafter ovarian transplantation[7,8,9] was done instead of extirpation in tubo-ovarian disease, but the necessity for this has been obviated by tubal ligation which prevents the cystic ovarian degeneration

incidental to salpingectomy.[10] The ovarian parenchyma survived only around the edges of the transplants, and then for just a short time.

Introzzi,[11] Wood and Curz,[12] Hanzanilla[13] and Bigelow[14] attacked the circulation and innervation in the ovarian and broad ligaments along the course

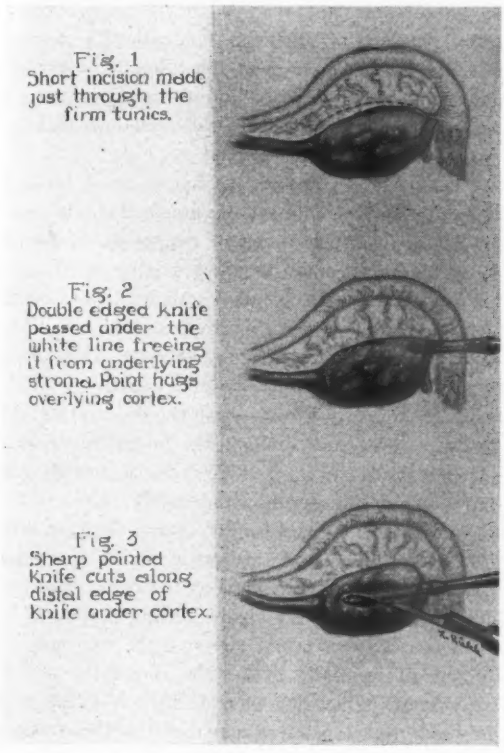
Fig. 1
Short incision made just through the firm tunics.
Fig. 2
Double edged knife passed under the white line freeing it from underlying stroma. Point hugs overlying cortex.
Fig. 3
Sharp pointed knife cuts along distal edge of knife under cortex.

Plate III.—Technique of operation when the ovary is not enlarged. If the ovary is cystic, the cysts, regardless of their size, should be attacked first and then the hilum explored.

of the ovarian artery and the tubo-ovarian branch of the uterine artery, but while this method may bring relief from pain by dividing the nerves, it cannot improve the circulation of the ovary because these structures are behind, and not at the location of the obstruction which is in no sense relieved.

Direct attack on the sclerotic and cystic ovary with considerable success has recently been accomplished. Bonney[15] urged the total enucleation of any type of non-malignant cyst, including dermoids, from polycystic ovaries, but makes no mention of cysts without ovarian enlargement. He also pleaded fervently for the retention of both ovaries, and objected to impairment of them from any quarter including x-ray. Siegler[16] believes that wedge shaped resections of the ovarian cortex, removing one to two-thirds from both ovaries, bring the best results. Stein and Cohen[17] thus report the restoration of normal ovarian cyclicity in 25 of 28 women. This method was carried to complete decapsulation or

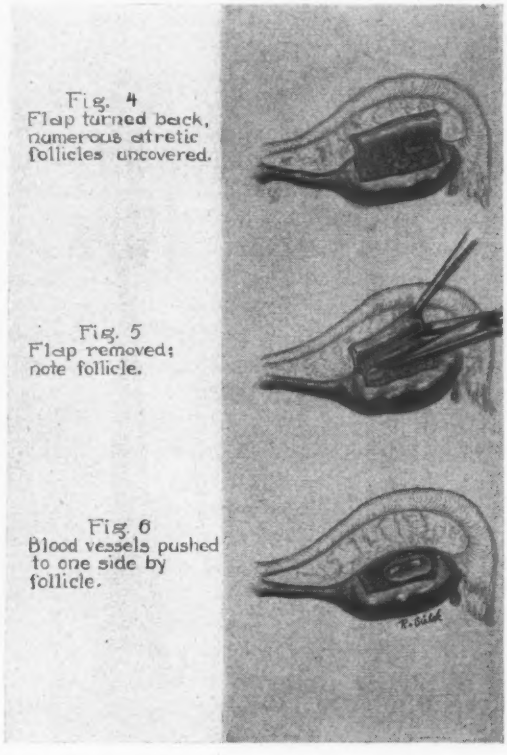
Fig. 4
Flap turned back, numerous atretic follicles uncovered.
Fig. 5
Flap removed; note follicle.
Fig. 6
Blood vessels pushed to one side by follicle.

Plate IV.—Turning the flap of the capsule back exposing the ovarian stroma. Follicles cannot always be seen, but if present, they can easily be palpated. The flap should not be removed too close to the mesovarium.

decortication by Reycraft[18] who obtained normal function in 5 of 6 cases of amenorrhea and pregnancy in one case.

Bailey[19] splits the ovary wide open, controlling bleeding by mattress sutures and leaving the raw surfaces exposed. He was successful in 13 of 17 patients with amenorrhea, pregnancy occurring in one case. In all of these methods every cyst that can be seen is ruptured with the intention of assisting the remaining follicles to maturity by facilitating their approach to the surface.

The objection to these latter procedures is again that the problem is not attacked as close to the source

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of the trouble as possible. If removal of large sections of the cortex is desired, it can be achieved much more easily by working from the hilum to the free border than in the reverse direction. There will be much less bleeding, vessels will not be divided indiscriminately, and the cysts at the hilum, where

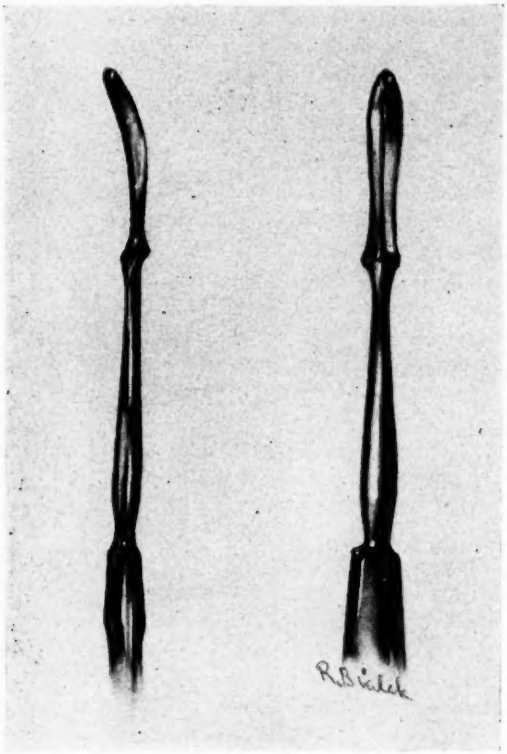

Plate V.—The Zinn tonsil knife with sharp rounded end and edges which is well suited for undermining the ovarian capsule.

they are more compact and crowded, will not be overlooked and can be removed or punctured. Above all, since the pathological background is more intelligible, it replaces empiricism with a definite therapeutic plan that may include any or all other ideas.

TECHNIQUE OF OPERATION

Exploration of an ovary as I am performing it violates one of the principal tenets of abdominal surgery in that it leaves surfaces uncovered by peritoneum. Yet it may not be as irregular as at first appears. Adhesions to the normal ovary are seldom if ever found, although raw surfaces of about the same character are present on one or the other for sometime during each menstrual cycle. Besides, the ovary is usually left in its normal position against the pelvic wall with the tube bending over it so there is little opportunity for contact with either the omentum or intestines.

All the structures attached to the ovary must be clearly defined. In the case of cirrhotic ovaries and those containing cysts without external indication, these are readily apparent. When the ovary is polycystic or contains one large and possibly several small cysts, the mesovarium and hilum is often hidden by the overlying tube and the many adhesions distort and rotate the whole mass, sometimes making their identification troublesome.

The ovary is held with the fingers, since because of its friability, instruments for grasping it or clamping the mesovarium cannot be employed. Only the dissecting knives and a needle or small pointed hook for opening the cysts are used. An incision is made at one pole of the ovary, beginning just a little below the white line, extending down the ovary about two-thirds of the way to the free border. A small blade must be used, and one must be careful that the knife goes just through the tough tunics and not into the stroma. This is done by cutting not quite through the capsule with a small scalpel, holding that incision open under tension by pressing down both poles; and then with the double-edged knife held in the same plane as the cortex, making a few strokes with its round cutting end until it sinks beneath the cortex. Because the flat back of the end of the knife pushes the stroma down and away from its covering there is little bleeding and the blade is accurately placed between the ovarian capsule and its contents. Holding the curved sharp end firmly against the under surface of the cortex, the knife is passed almost entirely across the ovary and finally brought out near the other pole. As the sharp end of the dissecting knife goes forward under the cortex it will meet firm resistance where corpora albicantia and fibrous bands are encountered, and these must be penetrated without hesitation. The edge of the knife near the free border is then slightly elevated or rotated outwards, lifting the cortex from the stroma, and an assistant cuts through the capsule over this edge with a small scalpel. The assistant cutting the tunics over the knife will be amazed by the hardness and the effort required to divide this structure as it is held up by the edge. During these manipulations the ovary must be kept still without traction on its attached structures.

Any follicles seen or felt can then be opened with a pointed hook or cutting-edged needle. If one constantly bears in mind that the tissues in the ovary are so arranged that their divisions run from the hilum to the free border and probe in that direction only, there will be little destruction of vital cells. On a small scale it is exactly like a muscle separation process. The palpating finger can be placed directly into the aperture made in the cortex, and the whole contents of the ovary with reference to the presence of cysts can easily be made out. The fluid and sometimes parts of sacs, even as far down as the free border, can be removed. If there be many cysts of the same size it may be advisable to open them through the cortex but in each case the opening must be adequate. That part of the cortex which has been elevated may then be removed but it should not be cut too close to the mesovarium. The uterine-ovarian ligament is inspected. In the physiologically inert ovary this ligament frequently is sclerosed, sometimes all the way to the uterus. It is opened by a small incision just through the peritoneum, beginning at the uterine end, then inserting a probe under the peritoneum down to the opening in the ovary, and cutting over the probe. According to Westman[20] this ligament contains smooth muscle and vessels which play an important role in the movements of the ovary that assist in the delivery of the ovum into the tube after rupture of the follicle.

The polycystic ovary may be managed best by opening the cysts first and afterward exploring the hilum. The cysts should be emptied and some of the wall resected to prevent them from refilling. This also allows the interior of the cyst eventually to become the exterior of the ovary, thus duplicating in a limited fashion nature's method for the disposition of the normal follicle. Bleeding can be controlled by suturing along the cyst edges with fine catgut, but the openings should not be closed. The hilum can then be explored and almost always many small follicles will be found there too. One will be agreeably surprised how much of an ovary will be obtained from what at first seemed a useless and hopeless organ.

The control of bleeding is not difficult. As yet I have not had to remove an ovary because of unmanageable hemorrhage. The dissected part of the capsule should not be removed too close to the mesovarium as it is necessary to take away just enough to leave an interval in the cortex along the length of the ovary. One need not hesitate ligating vessels because the blood supply up to the ovary is more than ample. Fine catgut on atraumatic needles should be used. Occasionally there is some bleeding from the stroma along the distal edge of the open cortex and no effort should be made here to clamp vessels because the tissue is too friable. Instead, sutures should be placed in the capsule along this edge which will draw the poles of the ovary slightly together, to be tied just tight enough to produce the necessary compression. The ovary will be somewhat distorted but the fine catgut will not last long enough to make this permanent if the aperture in the cortex is maintained. Recently I have not taken away that part of the capsule removed from the stroma and have not had to tie any vessels, but I think it does not leave sufficient space for follicles to expand. There need be no hurry. The ovary should be returned to its position and left there while something else is being done before vessels are tied, and frequently bleeding will cease spontaneously, probably through retraction of the spiral vessels. Coagulation, large clamps and heavy catgut will defeat the objectives by inducing scarring. The utmost gentleness, delicacy and respect for tissues must be observed.

One must not let the grossness of the lesion discourage or interfere with the orderly progress of the exploration. The transformations possible, after the internal pressures and circulatory changes have finally attained an equilibrium, cannot be predicted. Here a sympathetic and compassionate surgical artistry is required, which, if wanting, can barter the permanent psychological welfare for a temporary physical security.

COMMENT

Since the dawn of history sterility has been a source of such anguish as to drive women to all manner of grotesque, fantastic and bizaare instrumentalities for relief. These have included means of every imaginable kind, from prayers and incantations to shrines, drugs, superstitions and charms of any description, and all having fanatical adherents. Undoubtedly pregnancies have followed some of these efforts but whether they have a true connection can only be surmised. Certainly conception has followed many operations and non-surgical procedures carried out especially for this purpose, but it is not my intention to include this procedure with

them except to direct attention to it as another factor in sterility amenable to therapy.

The pursuit of endless youth has been another continuous quest and here again I have no idea that any recovery of ovarian function will postpone the inevitable climacteric. Despite the result in Cases 5 and 9, I feel that the menopause will arrive at the average age, if not before, and believe any benefits will come from being more comfortable until that time.

Still one cannot help but wonder what the corresponding changes are in the testicle, not with any idea of rejuvenation, but for creating naturally the desirable therapeutic responses so often obtained from the administration of testosterone propionate and its allied compounds during the later life of the male. While no cyclicity is present, the activity required by spermatogenesis and the psychosex hormone interdependence may have more effect on the vascular system as it makes the transition from the cord into the testicle than is commonly supposed. We do know there are alterations in size and internal pressure in the testicle, for that is a common experience. At any rate, its many aspects would make a fascinating subject for study.

There is hardly any question that a full understanding of the physiological necessity for two intact ovaries is not sufficiently widespread among gynecologists. The number of ovaries brought to the pathological laboratories of most hospitals attests the soundness of this statement. Everyone has seen young women who have had one ovary, one ovary and tube, or both tubes removed in youth return in any time up to ten years later long before the menopause with a variety of symptoms indicating ovarian dysfunction, frequently with discomforts sufficient to require the removal of what is left of their generative organs. This usually becomes manifest between the ages of 30 and 35 when one ovary can no longer carry the sex hormone burden; or, if bilateral salpingectomy has been done, the minute cysts which destroy the hormone producing cells render the ovaries similarly ineffective at this age. Many of these ovaries so carelessly and hastily removed could have been retained and their excision is less assurance that secondary operations will be required than if they had been considered with more deliberation and the aim that their function might be preserved.

The eagerness and alacrity with which anything promising relief is seized upon by those formerly tranquil, but now sensing a mysterious ascending threat to their psychodynamic stability, is clear evidence that ovarian inadequacy before the natural climacteric is no light matter and one the masculine mentality grasps only with the greatest difficulty, if at all. Whether the procedure I have outlined will eventually prove satisfactory or become more of academic interest than practical usefulness remains to be seen, but I do believe it will at least indicate that successful exploration of the ovary is feasible.

SUMMARY

It would seem, therefore, that an inquiry into the condition of the ovary goes further than a casual inspection of its exterior and should become a part of every laparotomy where these organs are within reach. It is likely to reveal much more than what is at first perceptible and a careful, delicate search can be rewarded by clinical improvement entirely out of proportion to the visible unimportance of the changes accomplished. There is much to gain, and with prudence and proficiency very little to lose. The disposal of undesirable cysts, whether large or small, achieved in a manner which retains the ovary as a functioning unit surely can do no harm.

The opportunity for the ovary to elaborate hormones, adjust its internal pressure, release vessels, nerves and muscles from strangulation and provide an additional surface for the maturation of follicles deep in the stroma are afforded by exploration of the ovary. Restoration of some of the ovarian functions and release of intra-ovarian tensions can bring relief from pain and improvement in the somatic and psychic phenomena resulting from deprivation or imbalances in the sex hormones until the menopause. Occasionally sterility is relieved. Within reasonable restrictions which should be clearly understood and accepted, the effect is to give the ovary a fresh start, with the leading extrinsic etiological factors perhaps no longer in existence.

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Searching the anatomies for a description of the white line, I found only two of the six most widely used made any reference to it, and only one, Piersol, mentioned Farre. Of the three leading medical dictionaries, all made the error of crediting its

first description to Frederick John Farre, an ophthalmologist, instead of his brother, Arthur. This line was studied later by Waldeyer (Das Becken, Bonn, 1899: p. 507) who pointed out that it was the junction between the epithelium of the mesovarium and the mucous membrane of the ovary. It corresponds in general to the limits of the hilus of several other authors.

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Quarterly Review of Pediatrics.

The first issue of this Review will appear in February with others following in May, August and November. Each number is thoroughly indexed and a cumulative index for each volume is included in the November issue. The "Bookshelf" department reports on all new books the pediatrician should know about, as soon as they are brought to editorial attention.

In the Foreword of the first issue, it is stated "The prime function of the Quarterly Review of Pediatrics is to make it feasible for the busy physician to keep abreast of the most recent progress in all branches of pediatrics with a minimum of time and effort. The Quarterly Review of Pediatrics serves also as an authoritative guide to original sources when more detailed information is desired.

"From a great diversity of national, state and special journals in this country and abroad the editors select for abstracting, as promptly as possible, all articles of significance which deal with disease conditions, health, growth, and mental welfare, from infancy through adolescence. These abstracts are prepared by trained bibliographers, mostly physicians."

Dr. Irving J. Wolman of the Children's Hospital, Philadelphia, is Editor-in-Chief.

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PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for December, 1945, as compared with the same month in 1944, and for the period of January through December, 1945, compared with the same period in 1944, follows:

	Dec. 1945	Dec. 1944	Jan.-Dec. 1945	Jan.-Dec. 1944
Typhoid and Paratyphoid	8	12	170	132
Diarrhea and Dysentery	112	567	7,102	6,813
Measles	238	43	1,625	17,116
Scarlet Fever	462	347	4,252	2,969
Diphtheria	101	35	580	329
Poliomyelitis	6	14	335	756
Meningitis	10	26	215	515
Undulant Fever	2	0	32	36
Rocky Mountain Spotted Fever	1	1	99	81
Tularemia	9	14	50	58

HEALTH EDUCATION AND THE PHYSICIAN

Formal public health education is a comparatively modern activity. State Health Departments, the U. S. Public Health Service, organizations such as the National Tuberculosis Association, the American Cancer Society, and the National Foundation for Infantile Paralysis, certain large life insurance companies, and commercial interests, including baking, dairy, meat, and the paper drinking cup, have been publishing or circulating for several decades informational material on disease prevention and personal health maintenance. Moreover, the tempo in these fields notably has increased in the more recent years.

To such press releases, magazine articles, health bulletins, and motion pictures, must be added public addresses on the subject of personal well-being by the orthodox and unorthodox, books by approved and unapproved authors, and the more enticing sales appeals for this, that and the other that reach the millions daily over the air waves.

Despite these efforts, most persons if well, even though not buoyantly so, are prone to be resistant to all but the commercial presentments. They let well enough alone until they become consciously ill, then send for the family physician from whom they expect immediate cure, even though the complaint may be a long, smoldering one.

Without deprecating the efforts of professional public health education, the fact remains that the most powerful influence in this activity is represented by the personal interest of the practicing physician. To him is opened an unusual opportunity to spread the gospel of personal health. However, except for a few physicians who have specialized in this line to their marked financial benefit, the medical profession has exhibited no particular enthusiasm for it.

It is quite true that the average physician during the war years and even today, is fully occupied in attending cases of acute illness, and little if any time for professional evangelism has been available. Assuming that conditions will become more normal, the general practitioner, if willing to do so, can do justice to this activity. Examination blanks covering this type of examination, as is well known, are readily available through the American Medical Association and State societies.

To render this type of service, the general practitioner must become an ethical salesman, which is somewhat against his natural inclinations and professional viewpoint. Since his first year in medical school he has been educated to the idea that his services must be *sought*. Therefore, for him to suggest as a matter of routine to his patients of thirty-five or older that they come to his office once or twice a year for an examination and give him money when they have no pain nor illness will be a departure.

Replying, it may be said that such physicians who follow this line of professional activity will be rendering a scientific service. The family doctor will indicate to his patients that the periodic examination is but a protective step against preventable disease and premature dissolution. He will emphasize the value of an early diagnosis for actual and suspected illness. He will suggest a proper living regimen, based on the individual findings of his investigations.

If this attitude were accepted generally by the practicing physicians, especially when the present demands of their time on their curative efforts ease somewhat, the profession should be able to detour many serious illnesses, succeed in blocking a large number of premature funerals, and by so doing afford professional skill its great chance at the last real enemy of healing art—man's own indifference of his personal welfare.

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MAKE MEASUREMENTS METICULOUSLY

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

"She looks all right. Why should she have had any trouble at delivery?" That was the question of a physician following the difficult delivery of a patient whose pelvis had not been measured. This misleading observation must have been one of the inciting causes for the statement that "human looks" —are "deceiving".

What value is attached to so-called pelvimetry? Do the measurements afford any information? Possibly doing the measurements makes the patient feel that she is getting something for her time and money. Certainly it makes the physician feel that he knows more about the patient's physical make-up.

It is rather infrequent that the textbook-normal measurements are found. When it does occur, that patient is more apt to be placed in the justo-major group. In order for the textbook-normals to be established, it was necessary to have as many above as below the established figures. When the normal is definitely reduced the diagnosis may be "generally contracted" or classed as "justo-minor". Many variations may occur between the upper and lower limits of normal—any one of which may indicate an abnormality and produce a problem at the time of delivery. Ingenuity is taxed when there is a debate as to whether delivery will occur through the passage provided. At this point the interpretation of the relationship of the measurements to each other may be of extreme value. The fact that a large fist goes between the tubers or that the promontory cannot be reached may be misleading. The wide tubers may mean rickets and the deep diagonal conjugate may mean that the mid pelvis is narrow.

Multiparity may increase, rather than decrease, the indications for pelvic measurements. It is embarrassing to find that previous deliveries have produced pathology or that new growths have appeared when a multipara, who has not been measured, presents herself in labor. In this case the measurements should not have been made purely for dimensions but rather to enforce an examination, at which time, the measurements could have been recorded easily. Previous babies may have been small. Succeeding pregnancies may result in progressively larger babies. If the patient is seen in time, there is no substitute for pelvic measurements; if seen late, making an internal examination may be impossible.

The routine use of x-ray pelvimetry is not believed justified; it may give valuable information in doubtful cases. It may be used to advantage when there is: a history of a previous difficult labor; an overriding head; a contracted mid pelvis; in locating the placenta in suspected praevia. Use of the x-ray is always dependent on its availability as well as on the ability to interpret the findings.

Discouraging incidents may follow well studied cases in that patients will fail to deliver when the measurements indicated that they should; and deliver, when they should not. All cases should be measured for the reason that an occasional life will be spared through a resulting, precise prognosis.

There are some physicians in Virginia who will not accept patients for delivery who have not had prenatal care. The time may come when a patient will have difficulty in securing the services of a physician unless her pelvis has been measured and diagnosed for this particular pregnancy.

MEDICAL SOCIETY OF VIRGINIA
Report of Delegates
on
Meeting of House of Delegates of American Medical Association

CHICAGO, DECEMBER 2-5, 1945

After a delay of some six months, due to travel restrictions incident to the War, the House of Delegates of the American Medical Association assembled in Chicago on December 3, 1945. By holding almost continuous sessions, the House was able to complete the business before it, and to adjourn at the end of December 5th.

The usual addresses by the President, President-Elect and Speaker of the House were delivered, and have been published in *The Journal.* These, together with numerous resolutions dealing with questions of social, scientific and economic significance, were referred to various reference committees for consideration, before being brought to the House for final action.

Of major importance was the adoption of the Fourteen Point Constructive Program for Medical Care, which had been proposed jointly by the Board of Trustees and the Council on Medical Service and Public Relations as of June 22, 1945. It defines the position of the American Medical Association with regard to questions of controversial nature now before the medical profession and governmental bodies, and furnishes a platform upon which all sections of the medical profession may unite for future activity. This program is presented and clarified in a special article by Louis H. Bauer, M.D., entitled "Medical Care for the American People", and published in *The Journal of the A.M.A.* for December 1, 1945, p. 945-948. Thoughtful perusal of this article is urged upon every physician.

Of especial interest was the addition to the present list of scientific sessions of a section on General Practice, with a representative from the section in the House of Delegates. The necessary changes in the by-laws and constitution were proposed, and it is expected that the section will be in operation at the next meeting of the association. It was further recommended that a new by-law be adopted providing for two meetings of the House of Delegates annually, instead of one, as at present. Thus, the policies of the association with reference to urgent problems confronting the association may be promptly expressed.

As had been done previously, the House of Delegates expressed its disapproval of compulsory sickness insurance, as proposed by the new Wagner-Murray-Dingell bill now before Congress. It also went on record as opposing the provisions in the Pepper bill for continuing and expanding the functions of the Children's Bureau, and recommended that this agency be separated from the Department of Labor, to which it is not properly related.

The House of Delegates was most favorably impressed by an address by Major General Paul R. Hawley, Acting Surgeon General of the Veterans' Administration, outlining plans for enlisting the help of civilian doctors in the care of veterans. This address, published in *The Journal of the A.M.A.* for December 22, 1945, p. 1192-1194, is most informative, and should be read by everyone interested in the medical care of veterans.

A number of resolutions touching upon the internal workings of the association were introduced. These attempted to define more clearly the authority and functions of its trustees, councils, officers, bureaus and employees. Though no important action resulted, the attending discussions brought to light the sentiments of various groups within the association toward its management, and will doubtless prove helpful in shaping the future activities of the various agencies. The extremely important functions of the Council on Medical Service and Public Relations was emphasized.

For the office of President-Elect, Dr. Harrison H. Shoulders of Nashville, Tennessee, for many years Speaker of the House of Delegates, was chosen, and as Vice-President, Dr. William R. Molony, of Los Angeles, California, long a member of the House of Delegates. Among those elected to fill vacancies on several Boards and Councils was our own delegate, Dr. Walter B. Martin, who was elected to the Council on Medical Service and Public Relations for a term of three years.

The next annual session of the association will be held in San Francisco, July 1-5, 1946. Plans are underway for the centennial celebration at Atlantic City in 1947, and St. Louis was selected for 1948.

WALTER B. MARTIN, M.D.
J. MORRISON HUTCHESON, M.D.

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WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President.....MRS. P. M. CHICHESTER, Abingdon
President-Elect.....MRS. J. E. HAMNER, Petersburg
Recording Secretary..MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary..MRS. L. C. BRAWNER, Richmond
Treasurer.....MRS. REUBEN F. SIMMS, Richmond

Mid-Year Report of the President.

As President of the Woman's Auxiliary to the Medical Society of Virginia, it is with pleasure that I submit the following report.

At the annual meeting the question was brought up of endorsing bills, as a component organization, on the Calendar of the Woman's Council of Legislative Chairmen of State Organizations.

Letters were written immediately to the President of the Medical Society and the members of the Advisory Council to the Auxiliary with regard to the licensure of practical nurses in Virginia and the prevention of pollution of streams in the State.

At the meeting of the Council of the Medical Society it was moved and carried that the bill regarding the licensure of nurses be referred to a Committee to confer with the State Board of Nurse examiners for further study, with instructions that they submit their recommendations to the Council at its Mid-winter meeting. The Medical Society approved backing the bill for the prevention of stream pollution.

On October the 31st a list of officers and committee chairmen was sent to Miss Margaret Wolfe, the Executive Secretary of the Woman's Auxiliary to the American Medical Association. She forwarded these to the National Committee Chairmen, who in turn were to forward material to our State Chairmen.

The order was then placed for the stationery. It was promised at the earliest possible date. It was received on December 13, and sent to officers, chairmen and local presidents on December 14th.

Letters were written to the presidents of the local auxiliaries, asking for their lists of officers and committee chairmen.

At the suggestion of the retiring president of the Williamsburg-James City Auxiliary, a former president who had returned to the city was asked to help this group resume meetings interrupted by the war. We have had no report of this.

The Loudoun-Fauquier Auxiliary has not been able to conduct meetings recently.

I have been unable to get a report of the Warwick County Auxiliary work.

The reports of the other groups show varied, useful and interesting work. The social, philanthropic and educational phases of the work are being carried on well in most cases. It is hoped that every auxiliary will have a philanthropic project with medical significance and continually add to our store of knowledge that we may be helpful allies to the medical profession and at the same time serve the best interests of the public.

One of the best ways to be informed is to study the *Bulletin* and *Hygeia*.

Because of her deep interest in this, Mrs. Clyde West, a past President, agreed to be chairman of the *Bulletin*. Her goal was that of our national organization, every member a subscriber to the *Bulletin*. She asked approval of writing to every member, enclosing a self-addressed envelope. Acting for you and with appreciation, I approved this. The monetary outlay was small and the response has been most gratifying. We are asked to continue to give our efforts to the major projects for the year—Juvenile Delinquency and Physical Fitness. Much thought and study is being given both problems.

Dr. Philip S. Smith, Chairman of the Advisory Council to the Auxiliary has been on the interim study committee of the Virginia Advisory Legislative Council to make a thorough study of existing conditions of medical needs and facilities in Rural Virginia. He wrote a brief summary of the recommendations of the Committee for the Auxiliary page of the VIRGINIA MEDICAL MONTHLY.

Dr. I. C. Riggin, Commissioner of Health was also on the committee. He will talk to us today on Rural Health and Prepaid Medical Care Plans.

Your president and president-elect attended the second annual Conference of State Presidents and Presidents-elect and National Chairmen of Standing Committees in Chicago on December 5th and 6th, 1945, in the Knickerbocker Hotel. It was educational and inspiring.

The December *Bulletin* is the Conference issue. Will you please read carefully the proceedings, ad-

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dresses and recommendations

The Auxiliary was urged to keep up its good work of augmenting the work of the physicians, to understand his work, to help him by understanding and talking over his problems.

It is imperative that we study and give time to legislative bills to become a force in effecting much good legislation.

Study A. M. A. 14 point program.

Life is a succession of opportunities. Let us grasp them.

MARIE C. CHICHESTER.

Death Claims Approximately 4,015 Doctors.

Death claimed approximately 4,015 physicians during 1945 as compared with 3,415 the previous year, according to the January 19 issue of *The Journal of the American Medical Association.*

On the basis of an analysis of 2,962 obituaries published in *The Journal* during the year, it was found that the average age at death was 65.3, the same as in 1944. The majority of the physicians—494—died between the ages 70 and 74.

Heart disease continued to lead the causes of death among physicians. Coronary thrombosis and occlusion accounted for 655 deaths, 246 occurring between the ages 60 and 69. Cancer and tumors accounted for 296, and pneumonia claimed 145 doctors.

Of the 25 suicides reported, 11 were the result of bullet wounds, three of a cut artery and three of drugs. There were 87 accidental deaths and 33 of them involved automobiles.

Among the decedents were 256 who had been teachers in medical schools, of whom 97 had reached professorial status. There were eight deans, one of whom had also been president of a medical college, two principals of a high school, two teachers in public schools, one of whom had been head of the business and practice department of the city's high schools, and 78 members of education boards. One hundred and forty-four had been health officers.

The 2,962 *Journal* obituaries included 116 physicians who were killed in action during World War II and 118 who died while in military service. Nineteen physicians lost their lives in the Pacific area, 13 in Germany, 12 each in the European Theatre of Operations and in France, and 11 in Okinawa, including six who were lost in the attack on the *Comfort.*

Of the 118 physicians who died while in military service, aircraft accidents caused the deaths of 22 and vehicle accidents of 10. Heart disease accounted for 25 deaths, 12 of which were attributed to coronary thrombosis. Cancer caused 13 deaths.

The 116 deaths classified killed in action give an average age of 33.0, while the 118 who died while in military service average 40.1. By combining the two, an average age of 36.6 is noted.

Of the seven U. S. Public Health Officers whose deaths were recorded, one died when he slipped on the Jacob's ladder while assisting wounded aboard ship and one when his ship was destroyed in enemy action.

Schenley Laboratories Commended.

Special commendation of its "splendid cooperation and untiring efforts" in the production of increasing quantities of penicillin vitally needed by the Armed Forces through the war period has been directed to Schenley Laboratories, Inc., in an official acknowledgment signed by Col. H. T. Marshall, of the Army Medical Purchasing Office, Army Service Forces, Office of the Surgeon General.

Schenley Laboratories, Inc., a subsidiary of Schenley Distillers Corporation, began pilot plant operations in 1943 after exhaustive laboratory research on penicillin, and subsequently launched production of Penicillin-Schenley on a commercial scale early in 1944, in its plant at Lawrenceburg, Indiana. Schenley Laboratories, Inc., is one of only 22 commercial producers of penicillin in North America.

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Editorial

The Forgotten Man

THE new year would have found the editor's desk reasonably clean had there not been a number of letters from doctors in the army of occupation. Not knowing what to do about them, we have simply let them lie, where each day they look at us reproachfully and cry out about injustice. One doctor writes that he is not a regular army doctor. He was not drafted, but came into the army by his own will, as a volunteer to fight for his country when it needed him. He has spent 18 months in the army, 12 months overseas, 127 days of which were continuous combat days in the Siegfried Line, Battle of the Bulge, Remangen Bridgehead and Central Europe. Now that the war is over he feels that he has done his duty, but after all those days of bloody misery, he has been forced into the Army of Occupation. Such men feel that they are deteriorating mentally and morally and should be replaced by men who have not seen combat duty.

Others write that they have nothing to do and can see no reason why they are kept overseas unless it is a sinister plot to further socialized medicine. They call themselves political prisoners. They can see no reason why the young men who were given a medical education at the expense of the government could not be sent over to relieve them. They claim that doctors at home who have never left the States are being discharged with fewer points than many doctors who are overseas, and they can see no justice in that.

A group of representative medical officers send the following suggestions from France:

1. Let there be adequate medical personnel for American soldiers in each theatre. No more, no less.

2. Get the surplus of those overseas home immediately. There is an overwhelming surplus. Get those with long overseas service home now. They can't take much more.

3. Let the A.S.T.P. and V-12 doctors earn their government education by a tour of duty overseas, thereby allowing the poor, forgotten, disillusioned, lethargic doctor a chance to return home.

4. The American Medical Association should pursue its function of protecting the rights of its members. Let us not again see the JOURNAL repeat, without criticism, the exorbitant demands of the army. It nauseates us who know the true state of affairs, and is an insult to our intelligence.

5. We think too that after the cessation of hostilities there ought to be at least a degree of medical autonomy. A representative committee of the profession should have the power to decide how many doctors for the military and how many for the civilian population.

The future of individualistic American medicine is in the balance. You can tip the scales in the right direction. But it must be done now.

Infectious Hepatitis.

THE occurrence of upwards of 50,000 cases of homologous serum jaundice in our Armed Forces following yellow fever vaccine has directed attention to a curious and interesting malady that might truly be called an army disease. In civilian life we are accustomed to seeing occasional isolated cases of "catarrhal" jaundice about the pathology of which we knew little. The common belief was that it was due to a di-

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gestive disturbance. Jaundice from all causes is recognized as occurring "normally" in armies at the rate of perhaps 0.10 cases per 1,000 men. After the administration of certain lots of yellow fever vaccine, notably No. 369 the case rate per 1,000 rose to 95.80. The vaccine used in 1941 and the first three and a half months of 1942 contained a small amount of presumedly normal human serum. Yellow fever vaccine containing human serum was discontinued April 15, 1942, when it became possible to produce a satisfactory product with an aqueous base.

This was not an entirely new problem. According to Findlay and Martin (*Lancet 1*:678, 1943), the British had studied it since 1934, and in 1937 were able to produce a yellow fever vaccine that was free from icterogenic properties. From November 1937 onwards no post-inoculation jaundice occurred in the many thousands of persons immunized in England and Africa. Similar precautions taken in Brazil also resulted in the elimination of jaundice as a sequel to yellow fever immunization.

In the words of Leland W. Parr (*M. Ann. District of Columbia 16*:443, 1945), "It is rare that herd outbreaks can be observed in man under such uniform conditions as existed in this instance in which constant and standard doses of an etiologic agent were placed in the tissues of large numbers of young adults, predominantly male, living under similar conditions and in like good health." At Camp Polk, for instance, 5,000 soldiers were inoculated with vaccine lot No. 369 on February 27, 1942, and remained at this camp for the next several months. Among them 1,004 cases of jaundice appeared. At Fort Custer on February 21st another group was immunized with lot No. 368. Some of these remained at Fort Custer and some were sent to Iceland. The incubation period as well as the severity of the disease varied tremendously in these cases. In the Camp Polk experience the earliest onset of symptoms was on the 15th day and the longest incubation period was 147 days. The mean incubation period was 96.41 with a standard deviation of 16.14 days. The Iceland group had a mean incubation period that was 9 days shorter than that of the group that remained at Fort Custer. The contribution of the host and his environment to the variability in case incidence, length of incubation period and variety and severity of symptoms has not been as yet sufficiently studied.

An apparently identical disease followed the administration of mumps convalescent plasma, (*Proc. Roy. Soc. Med. 37*:449, 1943-44). Certain batches of serum or plasma gave rise to as high as 50% incidence of jaundice that appeared about 3 months after the injection. In a discussion on infective hepatitis, homologous serum hepatitis and arsenotherapy jaundice before the Section of Experimental Medicine and Therapeutics of the Royal Society of Medicine, Marshall (*Proc. Roy. Soc. Med. 37*:449, 1944) reported on postarsphenamine jaundice. The late appearing type which occurred from the 12th to 17th week after beginning treatment was much less frequent in civil V. D. clinics than in the military clinics, although the routine was much the same. He thought that the infective factor was introduced by syringe, but that diet and the damaging effect of the arsenic on the liver may have been of some secondary importance. Loutit (*Proc. Roy. Soc. Med. 37*:460, 1944), in a series of cases of homologous serum jaundice which followed the administration of a particular batch of dried human serum, showed that a minute dose, no bigger than a trace of blood left in a syringe after arsphenamine administration, could cause the disease. Sheehan (*Lancet 2*:8, 1944) regards the findings in regard to syringe-transmitted infection, the hepatitis transmitted by the injection of yellow fever vaccine containing dried human plasma, and the hepatitis following measles or mumps convalescent serum and blood transfusions, to be the same. The common factor in all has been injection of presumedly

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infected human blood or plasma with the development of hepatitis 2 to 4 months later. The donor blood appears to have been taken in the incubation stage, as there is no record that donors with jaundice were ever used. It is suggested that infective hepatitis in England and in the army in the Mediterranean theatre is also the same type of disease with a similar incubation period and that it could well be transmitted by biting insects.

In spite of almost ideal experimental-laboratory conditions very little has been learned about this disease. The cases that have come to autopsy, and there have been scores of them, have shown diffuse degeneration of the liver. Some have inflammatory infiltration of the intestinal mucosa. That the disease is caused by a virus is generally surmised. The cases that were produced artificially do not seem to be infectious as are the naturally occurring infectious hepatitis cases. However, Findlay and Martin (*Lancet 1*:678, 1943) have produced jaundice with an incubation period of 28, 30 and 50 days in human volunteers by instilling into their nares washings from the upper respiratory passages of patients in the preicteric and early icteric stages of post yellow fever vaccine jaundice. Gowen (Bull. U. S. Army Medical Department, January 1945, p. 41) who studied some 400 cases of epidemic hepatitis in Northern Tunisia in 1943 concluded that "the disease is caused by a viable agent which may be highly communicable but possesses only a mild degree of communicability,"—whatever that may mean.

Loutit and Maurisel (*Brit. M. J. 2*:757, December 1, 1945) call attention to the fact that homologous serum jaundice rarely follows individual transfusions (only two cases have been reported) but frequently follows the use of pooled blood, serum or plasma. It seems likely therefore that the icteric agent can be present only in very occasional bloods. Pooling of many plasmas or sera may therefore be ill-advised, as one icterogenic plasma might contaminate the whole pool. It has even been suggested that dilution of the agent might increase its virulence.

The practical lesson that civilian doctors should learn from this gigantic "experiment" is that one cannot be too careful in the sterilization of syringes and needles used not only in intravenous therapy, but also in obtaining samples of blood for diagnostic purposes.

Twenty-fifth Anniversary of the American Journal of Obstetrics and Gynecology.

WITH the December number the *American Journal of Obstetrics and Gynecology* celebrated its twenty-fifth anniversary. Dr. Robert L. Dickinson contributed a characteristically fine title page. In the decorative border he has incorporated a musician as an appeal to Apollo, an albatross for luck while Dr. Dickinson, himself, equipped with wings, holds up one side of the shield of obstetrics and gynecology. The journal began publication in October 1920 as the successor of the *American Journal of Obstetrics and Diseases of Women and Children* which had been founded in 1868. In the 77 years covered by these two journals, obstetrics and gynecology have become recognized specialties. Obstetrics, especially in English speaking countries, grew out of a medical background, and gynecology out of a surgical background. Both have been tremendously changed by new knowledge derived from physiology and endocrinology. Both developed into independent specialties, and now we see them being fused into a single discipline. On the other hand since the public has learned that obstetrics is indispensable, there is a movement on foot for the government to take it over and to dispense it politically, and thus disrupt the union that promises so much.

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The tremendous advances in knowledge that have occurred in the past 25 years and the more recent changes in social aspects, have been reflected in the pages of the *American Journal of Obstetrics and Gynecology*. Not only do we know more about the development of the embryo, the physiology of reproduction and the role played by the endocrines, but we have become more interested in gynecological pathology with its endocrine implications. The widespread use of blood and plasma has altered the outlook in surgical and obstetric operations. Sulfanilamides and penicillin have simplified the treatment of infections. Simultaneously, the profession has undertaken a rigid self-analysis of methods and techniques which has resulted in a tremendous lowering of maternal and fetal mortality. Dr. George W. Kosmak who has edited the Journal since its beginning may well be proud of the part the Journal has played and also of the part he personally has played in these developments.

Societies

The Albemarle County Medical Society,

At its annual meeting on January the 3rd, elected Dr. Edwin P. Lehman of the University of Virginia as president for the coming year, and Dr. E. D. Davis of Crozet as vice-president. Dr. W. Roy Mason of the University was re-elected secretary-treasurer.

Alexandria Medical Society.

At the regular monthly meeting of this Society, held on January 10th, Dr. Noel Stow of Washington spoke on "The Effects of Thiouracil on Exophthalmus". Dr. L. Floyd Hobbs is president of this Society and Dr. James A. Gooch, secretary.

Patrick-Henry Medical Society.

The regular quarterly meeting of the Patrick Henry Medical Society was held at Broad Street Hotel in Martinsville, on Friday evening, January 11, 1946. After an enjoyable dinner the meeting was called to order by Dr. E. N. Shockley who presented the new President, Dr. T. H. Dickerson. The business of the evening consisted of the appointment of standing committees, the endorsement by the society of the Charity League Diphtheria Immunization program, and the endorsement by the society for the Nursing Committee of the Henry County Chapter of the American Red Cross to advocate the establishment of a Local Health Service for Martinsville and Henry County. Several applications for membership were turned over to the membership committee.

Following the business meeting, Dr. A. M. Groseclose of Roanoke, gave an interesting and instructive paper on Caeserean Section.

Dr. W. N. Thompson of Stuart is secretary-treasurer of the Society.

Norfolk County Medical Society.

At the meeting on January 14th, the guest speaker was Dr. Frank R. Lock, Professor of Obstetrics and Gynecology, Bowman Gray School of Medicine, Wake Forest, North Carolina. His subject was Postpartum Sterilization.

Roanoke Academy of Medicine.

At the regular meeting of the Academy on January 7th, guest speakers were Drs. Charles A. Poindexter and A. Wilbur Duryee, associate clinical professors of medicine at the New York Post-Graduate Medical School, Columbia University. Dr. Poindexter spoke on Recent Advances in the Treatment of Heart Disease, and Dr. Duryee on The Management of Venous Thromboses and Pulmonary Emboli.

Dr. T. J. Hughes is president of the Academy and Dr. George Bourne, secretary.

Virginia Peninsula Academy of Medicine.

The scheduled speaker for the January 21st meeting of the Academy, Dr. Helen Taussig, of Johns Hopkins Hospital, was unable to attend because her plane was grounded by bad weather. To fill in, Dr. William A. Read of Newport News spoke on the use of the Miller Abbott tube. There was an attendance of eighty at this meeting. Dr. Harvey G. Bland and Dr. C. D. Bradley, both of Newport News, are president and secretary, respectively.

News

The Tri-State Medical Association of the Carolinas and Virginia

Is to hold its 47th annual meeting in Richmond, February the 25th and 26th, under the presidency of Dr. G. H. Bunch of Columbia, S. C. Below is a list of those on the preliminary program, with their subjects:

Dr. Thos. Brockman, Greenville, S. C.—Why All States Should Have a Basic Science Law.

Dr. Clay W. Evatt, Charleston, S. C.—Refraction Changes in Health and Sickness.

Dr. J. M. Feder, Anderson, S. C.—Adequate Laboratory Service for the Rural Hospital.

Dr. Katharine B. MacInnes, Columbia, S. C.—The Use of Vitamin K in Urticaria.

Dr. F. E. Kredel, Charleston, S. C.—Surgical Relief of Post-Traumatic Pain, Including Painful Scars.

Dr. George R. Wilkinson, Greenville, S. C.—Rheumatic Fever.

Dr. Charles N. Wyatt, Greenville, S. C.—Medical Conditions as Found in the Middle East.

Dr. David Cayer, Winston-Salem, N. C.—The Laboratory Diagnosis of Deficiency Diseases.

Dr. Clyde Gilmore, Greensboro, N. C.—Functional Cardiovascular Disturbances.

Dr. Walter Kempner, Durham, N. C.—Some Effects of the Rice Diet Treatment of Hypertension.

Dr. Sylvan A. Steiner, Washington, D. C.—Studies on Essential Hypertension.

Dr. Jas. W. Watts and Dr. Walter Freeman, Washington, D. C.—Psychosurgery—Factors Influencing the Prognosis.

Dr. Chas. Stanley White, Washington, D. C.—Intravenous Protein Solutions in Surgical Practice.

Dr. Russell Buxton, Newport News—The Use of Penicillin in the Treatment of Tetanus.

Dr. Guy W. Horsley, Richmond—Results of Treating Cancer of the Breast With Radical Amputation and Bilateral Oophorectomy.

Dr. Linwood D. Keyser, Roanoke—Present Day Treatment of Urinary Stone.

Dr. R. L. Raiford, Franklin—Intravenous Anesthesia.

Dr. Chas. R. Robins, Richmond—(subject not given).

Guest Speaker:

Dr. Matthew T. Moore, Philadelphia, Penn.—Some Usual and Unusual Mechanisms of Abdominal Pain.

President's Address:

Dr. George H. Bunch, Columbia, S. C.

Further information may be obtained from Dr. James M. Northington, secretary-treasurer, Charlotte, N. C.

Back In Civilian Practice.

The following doctors, in addition to those previously announced in the MONTHLY, have advised us of their release from service and reopening of their offices:

Dr. Nathaniel J. Chew has returned to Bristol and opened offices for the practice of internal medicine. He was recently associated with Lt. Col. C. M. Caravati at Woodrow Wilson Hospital, Staunton.

Dr. Grant R. Elliott is back in Orange and engaged in general practice.

Dr. A. Stephens Graham, Richmond, has reopened his office at Stuart Circle Hospital for the practice of general surgery.

Dr. Edward E. Haddock, Richmond, will be engaged in general practice, with offices at 2019 Monument Avenue.

Dr. D. O. Helms, formerly of Pocahontas, has located for general practice at Hellertown, Pa.

Dr. John O. Hurt, who entered the service from Roanoke and was engaged in neuropsychiatric work in the Pacific area, has returned and located at Vinton.

Dr. J. L. Mann, Hampton, has gone to the Northwest Clinic, Minot, North Dakota, where he will work in the department of internal medicine for sometime.

Dr. Walter L. Nalls, formerly of Richmond, has opened offices in Alexandria, where he will be engaged in the practice of internal medicine.

Dr. James Parrish, Portsmouth, has reopened his office at 600 Court Street, where he is limiting his practice to surgery, gynecology and obstetrics.

Dr. Allen Pepple has returned to Richmond and is again associated with Dr. Richard W. Fowlkes in the practice of dermatology, with offices in Professional Building.

Dr. E. W. Perkins has returned to Richmond and reopened his office for the practice of ophthalmology.

Dr. James S. Richardson is now engaged in general practice at Grundy.

Dr. Chester L. Riley resumed his practice in obstetrics and gynecology in Winchester the first of February.

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Dr. Joshua P. Sutherland, class of March '43, University of Virginia, has located at Harman where he is in industrial practice.

Dr. W. Taliaferro Thompson, Jr., has opened offices for the practice of internal medicine in Medical Arts Building, Richmond.

Dr. George D. Vermilya has returned to Richlands and resumed his practice of surgery at the Clinch Valley Clinic.

Other members recently returned from service are:

Dr. Walter P. Adams, Norfolk.
Dr. Charles V. Amole, Alexandria.
Dr. Emerson M. Babb, Ivor.
Dr. J. Lawson Cabaniss, Roanoke.
Dr. W. H. Chapman, Jr., Suffolk.
Dr. Franklin H. Cohen, Norfolk.
Dr. John Crawford, Norfolk.
Dr. Grant R. Elliott, Orange.
Dr. F. O. Fay, Norfolk.
Dr. Frank Helvestine, Jr., Roanoke.
Dr. Chester F. Hogan, Richlands.
Dr. J. R. B. Hutchinson, Arlington.
Dr. John Paul Jones, Richmond.
Dr. Ben M. Kagan, Richmond.
Dr. C. E. Keefer, Lynchburg.
Dr. R. G. McAllister, Richmond.
Dr. Walter McMann, Danville.
Dr. Lawrence J. Motyca, Norfolk.
Dr. Sidney G. Page, Jr., Richmond.
Dr. Wilmer H. Paine, Charlottesville.
Dr. Benjamin F. Phillips, Quantico.
Dr. Prosser H. Picot, Alexandria.
Dr. W. E. Roye, Richmond.
Dr. Robert R. Rudolph, Roanoke.
Dr. George W. Simpson, Norfolk.
Dr. Frank P. Smart, Norfolk.
Dr. Norman Sollod, Petersburg.
Dr. Luther C. Spengler, Jr., Roanoke.
Dr. Joseph Staley, Marion.
Dr. J. Powell Williams, Richmond.
Dr. L. K. Woodward, Front Royal.
Dr. Frank A. Zack, Newport News.

Commissioner of Mental Hygiene.

Upon recommendation of the State Hospital Board, Governor Tuck has appointed Dr. Joseph E. Barrett as State Commissioner of Mental Health, to fill the vacancy caused by the death of Dr. Hugh C. Henry. Dr. Barrett was formerly director of the Michigan State Hospital Commission and, when he first came to Virginia, was connected with the Southwestern State Hospital at Marion. Since the fall of 1943, however, he has been administrative head of the Eastern State Hospital at Williamsburg.

Dr. Riggin Honored.

Dr. Irl C. Riggin, State Health Commissioner, was the recipient of one of the 1946 Albert and Mary Lasker Foundation awards of $500.00 presented by the Planned Parenthood Federation of America at its 25th Anniversary Dinner in New York on January 23rd. This award was given for meritorious public health service. Dr. Riggin has led Virginia in becoming the seventh state in the union to make planned parenthood services available as part of the state's public health program of maternal care.

The other award was presented to Dr. Robert Latou Dickinson, New York City, for the most significant contribution to research in human fertility.

News from University of Virginia, Department of Medicine.

The School of Medicine, University of Virginia, gave a two weeks Refresher Course in general medicine for medical officers recently separated from military service from December 3rd through December 15th. Thirty-three veterans were enrolled in the course. Among the non-faculty group who participated in this course were Major John H. Dingle, Director of Army Commission on Respiratory Infections, Fort Bragg, N. C.; Dr. Harrison F. Flippin, Associate Professor in Medicine, University of Pennsylvania; Lt. Col. Perrin Long, Professor of Medicine in Johns Hopkins Medical School; Dr. Everett I. Evans, Associate Professor of Surgery in the Medical College of Virginia.

Dr. Ying-Tang Hsu, formerly professor of pathology at Yale-in-China, at Changsha, has arrived at the University of Virginia to fill a position as visiting professor of pathology and resident pathologist for the University of Virginia Hospital.

Dr. H. Rowland Pearsoll, a research fellow in internal medicine, read a paper, "Reactions to Antipneumococcal Rabbit Serum, III. Effects of varying Amounts of Pneumococcal Polysaccharide on Reversed Passive Anaphylaxis in Guinea Pigs, IV. A Simple Roughly Quantitative Method of Measuring Circulating Polysaccharide", at the meeting of the American Academy of Allergy in Chicago, on December 10 and 11, 1945. Dr. Staunton L. Eversole and Dr. Oscar Swineford, Jr., were co-authors.

Dr. Oscar Swineford, professor of the practice of medicine, presided at the meeting of the American

Academy of Allergy in Chicago, December 10 and 11, 1945. The subject of the Presidential Address was "Report of a Survey of Undergraduate Education in Allergy in the United States".

Dr. Samuel A. Vest, professor of urology, was elected chairman of the Section on Scientific Exhibits for the forth-coming meeting of the American Urological Association to be held in Cincinnati in June, 1946.

Personnel Changes, State Department of Health.

Dr. William Grossman, Director of the Bureau of Communicable Disease Control, returned to the Department from the Armed Services as of January 1st.

Dr. Donald K. Freedman, Surgeon (R) USPHS., who was on loan to the Department, and who has been acting as Health Officer of the Peninsula Health District, has been withdrawn by the USPHS effective December 8, 1945.

The McGuire Clinic,

Richmond, announces the enlargement of its staff by the addition of Dr. George A. Welchons in the department of bronchoscopy, Dr. George S. Bowers in general medicine, Dr. John R. Massie in general surgery, and the return of Dr. Charles M. Nelson in urology.

Of special interest to the friends of Dr. McGuire is the dedication, recently noted, of John A. Hardy's "Synopsis of the Diagnosis of the Surgical Diseases of the Abdomen", second edition, published in 1945, which reads as follows:

"To Stuart McGuire of Virginia who embodies the genius and excellence of a lineage of great surgeons, this book is admiringly dedicated."

Dr. C. Sherrill Armantrout,

Who completed his residency in surgery at the Medical College of Virginia Hospitals, Richmond, July 1, has opened an office in Harrisonburg, and will limit his practice to general surgery.

Dr. Bruno Barelare, Jr.

Resigned his position as assistant professor of urology at the University of Virginia as of January 1, and is now associated in urology with Dr. Walter F. Scott in Birmingham, Alabama. Since locating there, he has been appointed associate professor of urology at the University of Alabama Medical College.

Dr. Edwin D. Vaughan,

Of Ashland, is now in New York City, where he is taking a 2-year residency at the New York Eye and Ear Infirmary.

Dr. W. E. Overcash,

Formerly of Roanoke, has moved to Danville where he has offices in the new x-ray department of the Memorial Hospital. New equipment has been installed in this department, including both superficial and deep x-ray therapy.

National Gastroenterological Association Award Contest.

The National Gastroenterological Association announces the establishment of an Annual Cash Prize Award of $100 and a Certificate of Merit for the best unpublished contribution on Gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country. The winning contribution will be selected by a board of impartial judges and the award is to be made at the Annual Convention Banquet of the National Gastroenterological Association to be held at the Hotel Pennsylvania in New York City on Thursday evening, June 20, 1946.

All entries for the 1946 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than May 1, 1946. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

The A. P. A. A. (Ninth) 1947 Exhibition,

To be held at Atlantic City, on the occasion of the Centennial Session of the American Medical Association, will also be the occasion of the judging of the "Courage and Devotion Beyond the Call of Duty" Art Prize Contest ($34,000 in Savings Bonds).

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This contest was originally scheduled for the 1946 A.M.A. Session but has been postponed one year, upon the best advice, in order to give more physician an additional year to complete their art pieces on this special prize subject.

For further information regarding both the San Francisco 1946 and the Atlantic City 1947 Art Exhibits, physicians may write either the American Physicians Art Association Secretary-Treasurer, Dr. Francis H. Redewill, Flood Building, San Francisco, Cal., or the sponsor, Mead Johnson & Co., Evansville 21, Ind.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation

Announces that the annual prize contest will be conducted again this year. For information, address Dr. James R. Bloss, secretary, 418 Eleventh Street, Huntington 1, W. Va.

Dr. Thomas L. Gemmill

Has resigned his position on the staff of St. Albans Sanatorium and returned to private practice in Radford.

Dr. Wiley D. Lewis,

Of Johnson City, Tennessee, has rejoined the staff of St. Albans Sanatorium, at Radford. He was on the staff of this hospital for about a year prior to entering the army in 1942, having first gone there from Adams House in Boston, where he had served as a physician for a year. He is a graduate of the University of Tennessee in 1931.

Urology Award.

The American Urological Association offers an annual award "not to exceed $500" for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years. All interested should write the Secretary, for full particulars.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Netherland Plaza, Cincinnati, Ohio, July 22-25, 1946.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before July 1, 1946.

Dr. Lintner Clark,

For the past three years located in Roanoke, has moved to Raleigh, N. C., where he will continue the practice of roentgenology.

Dr. W. W. Wilkinson,

LaCrosse, has been elected president of the Bank of LaCrosse.

Married.

Dr. Paul Ward Robinett, Huntington, W. Va., and Miss Shirley Harwood Kersey, Richmond, December 31st. He is a graduate of the Medical College of Virginia, class of 1945, and is serving an internship at the Peter Bent Brigham Hospital, Boston.

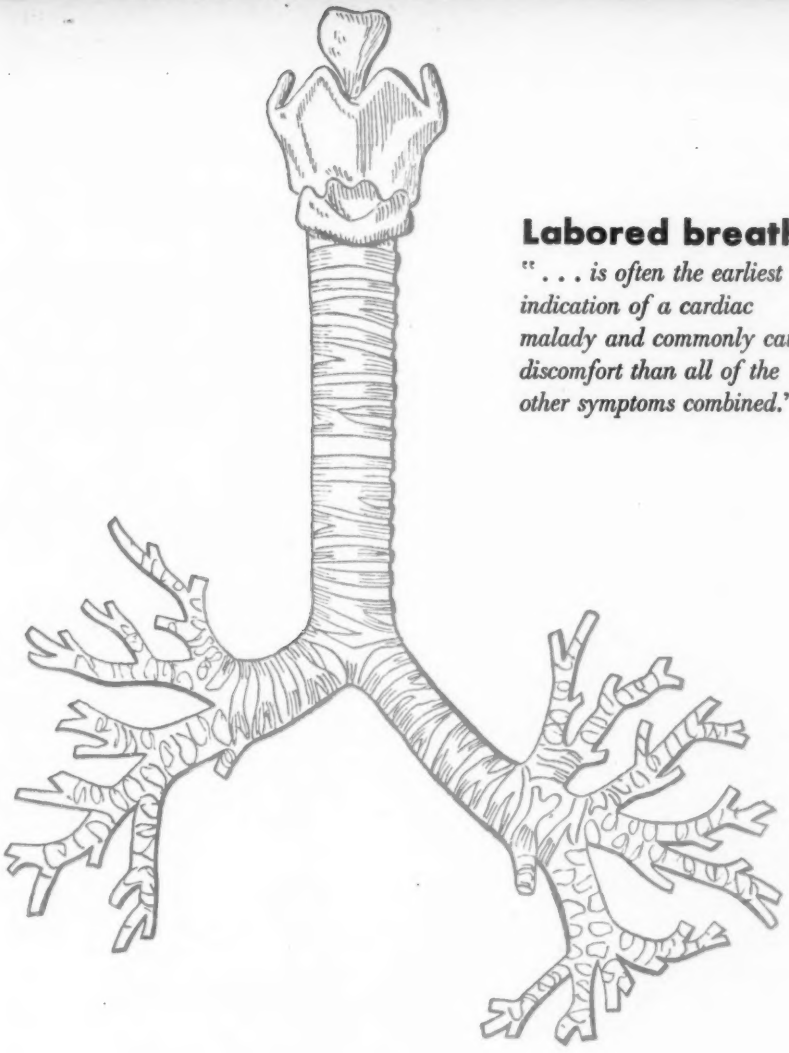
Dr. William H. Matthews,

Richmond, has been appointed assistant to the chief medical officer of the Veterans' Administration subregional office in Richmond. He was recently discharged from the Medical Corps of the Army, after serving with the First Army in France, Belgium and Germany. Dr. Matthews is a graduate of the Medical College of Virginia, class of 1935, and was located in Atlanta, Georgia, before entering the Service.

The U. S. Public Health Service

Announces that appointments to fill vacancies in the Reserve Corps of the Service are now being made, and examinations for Regular Corps appointments will be held in April and May. Physicians, dentists, and nurses are needed immediately for duty in hospitals, in the Tuberculosis and Venereal Disease Control programs, and in other activities of the Public Health Service. Pay and allowances, established by law, are identical with those for medical officers of the Army. All travel expenses, including travel to first station, are paid by the Service.

Appointments to the Reserve Corps are made on a basis of review of data furnished by the applicant. Physical examination is required. Regular Corps



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1. Harrison, T. R.: Cardiac Dyspnea, Western J. Surg., 52:407 (Oct.) 1944.

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appointments require appearance before a Board, and a written professional examination. Dates and places for the examination will be announced shortly. A person receiving an appointment in the Reserve Corps immediately, may, if he desires, take the examination for the Regular Corps at the time they are held.

Those interested in either immediate appointment in the Reserve Corps, or in taking the examination for the Regular Corps, should request application forms of the Surgeon General, U. S. Public Health Service, Washington, D. C., Federal Security Agency.

New Books.

The following books recently added to the Library of the Medical College of Virginia are available to our readers under usual library rules:

Allison—Sea diseases. 1943.
Ballenger—A manual of otology, rhinology and laryngology. 2nd ed.
Barclay—The foetal circulation and cardiovascular system.
Beardwood—Simplified diabetic management. 4th ed. 1944.
Bly—A guide to cathode ray patterns.
Brock—The basis of clinical neurology. 2nd ed.
Brody—Bioenergetics and growth. 1945.
Burch and Winsor—A primer of electrocardiography.
Burnet—Virus as organism.
Cantarow—Clinical biochemistry. 3rd ed. 1945.
Clement—Nitrous oxide-oxygen anesthesia.
Cobb—Borderlands of psychiatry.
Cohn—Proteins, amino-acids and peptides as ions and dipolar ions.
Colcord—Your community.
Comroe—Arthritis and allied conditions. 3rd ed. 1944.
Day, Sister Mary A. C.—Principles and techniques of nursing procedures as developed in St. Mary's.
Flagg—The art of resuscitation.
Frobisher—Fundamentals of bacteriology.
Geckeler—Plaster of Paris technic.
Heath—What people are.
Höber—Physical chemistry of cells and tissues.
Hoffman—Female endocrinology.
Horney—Our inner conflicts.
Hurry—Imhotep.
Ivy and Curtis—Fractures of the jaws.
Karrer—Organic chemistry.
Kracke & Garver—Diseases of the blood and atlas of hematology.
Kuntz—The autonomic nervous system.
Kuntz—A text-book of neuro-anatomy.
Landsteiner—Specificity of serological reactions. 2nd ed. 1945.
Lawrence—The diabetic life. 13th ed.
Macleod—Notes on the surgery of the War in the Crimea, with remarks on the Treatment of gunshot wounds. 1862.
Meerloo—Total war and the human mind.
Milbank Memorial Fund—New steps in public health. 1945.
Olkon—Essentials of neuro-psychiatry.
Raper—Man against pain; epic of anesthesia.
Reynolds & Manning—Excursion in science.
Rosenow—Poliomyelitis. (The International Bull.)
Savill—The hair and scalp. 3rd. 1945.
Steinberg—Infections of the peritoneum. 1944.
Sutton—A history of the disease usually called typhoid fever. 1850.
Taylor—Cinchona in Java.
Temkin—The falling sickness, a history of epilepsy from the Greeks to the beginnings of modern neurology.
Thorpe—Personality and life.
Wartenburg—Examination of reflexes. 1945.
Weddell—St. Paul's Church. 2 vols.
Wolff—A pathology of the eye. 2nd ed.

Dr. Benjamin M. Kagan,

Richmond, before leaving the service, received a commendation from the commanding officer of his headquarters for superior performance of duty as epidemiologist, chief of the Theater Laboratory service and commanding officer of the 200th Station Hospital.

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Physician to practice in Stafford County, Virginia. Population 10,000. Only one physician in county. Will offer financial aid to establish. Write to E. L. C. Derrick, Secretary, Public Health Association, Stafford, Virginia. *(Adv.)*

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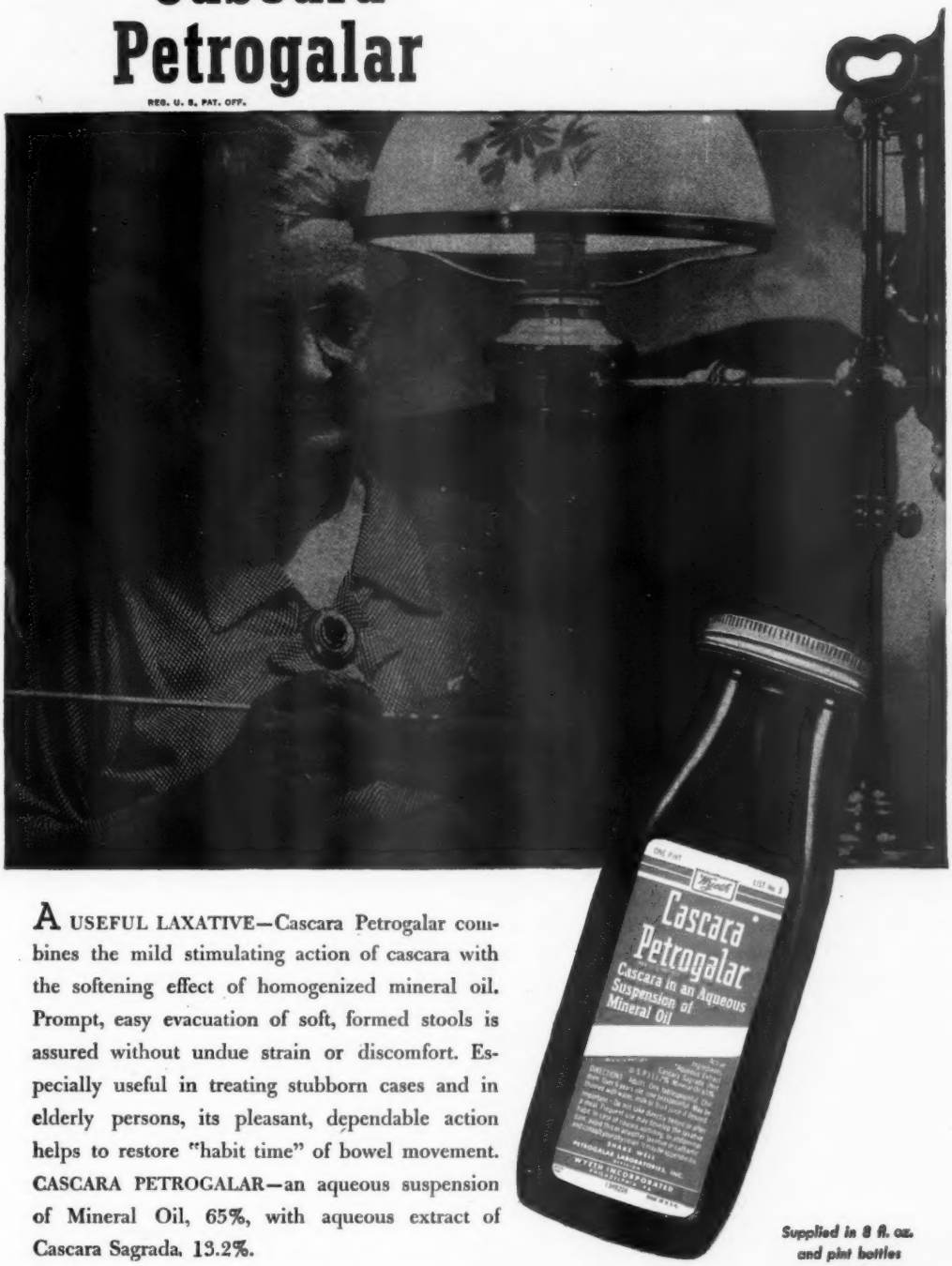

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Obituaries

Dr. Claiborne Willcox,

Prominent Norfolk pediatrician, died December 30th following a heart attack. He was fifty-five years of age and a graduate in medicine from the University of Virginia in 1915. Dr. Willcox served abroad as a medical officer in the Army during World War I. He had practiced in Norfolk for twenty-six years. He was a past president of the Norfolk County Medical Society and had been a member of the Medical Society of Virginia for twenty-eight years. His wife and three children survive him.

Dr. Rosser Noland Hillsman, Jr.

Who was located at Amherst before entering the service in 1942, died August 31 of nephritis. He was thirty-seven years of age and a graduate in medicine from the University of Virginia in 1933.

Dr. Houston Robinson Farley.

This office has just been advised of the death of Dr. Farley which occurred at his home in Pulaski, June 20, 1944, at the age of sixty-five. Dr. Farley graduated in medicine from the former University College of Medicine, Richmond, in 1904. He was a member of the Southwestern Virginia Medical Society and had been a member of the Medical Society of Virginia for twenty years.

Dr. Waller Smith Leathers,

Dean Emeritus of Vanderbilt University School of Medicine, and nationally known in the field of public health, died at his home in Nashville, on January 26. Dr. Leathers was born near Charlottesville, Va., in December 1874, and was graduated in medicine from the University of Virginia in 1895. Before going to Nashville in 1924, he was connected with the University of Mississippi, being one of the organizers of its school of medicine. Dr. Leathers held many positions of honor, and was a former president of the National Board of Medical Examiners, the American Public Health Association, and the Association of American Medical Colleges. His wife and a daughter survive him.

Dr. Everett A. Land.

At a meeting of the Staff of the Norfolk General Hospital, December 4, 1945, the following resolutions were unanimously adopted:

WHEREAS, in the death of Dr. Everett A. Land, of Norfolk, Virginia, who passed away October 30, 1945, this body has lost one of its most loved and valuable friends and advisors.

Dr. Land was born in Princess Anne County, Virginia. He attended Old Norfolk Academy, graduated from the University College of Medicine at Richmond, Virginia, in 1906 and took a year internship at Sarah Leigh Hospital in Norfolk. He then attended Brooklyn Eye, Ear, Nose and Throat Hospital in the speciality in which he later followed.

He began to practice medicine in the City of Norfolk in 1909 where he limited his work to eye, ear, nose and throat. He served on the Clinical Staff of Norfolk General Hospital from the time it was organized until the time of his death. Being an intensely active worker, his practice included all creeds and colors, rich and poor, who loyally followed him, and who will have no replacement for his genial personality and the influence of his friendship. Having been intimately connected with the Norfolk General Hospital and its predecessors for nearly forty years, his ability, judgment and friendship will be greatly missed.

BE IT RESOLVED that the Staff of the Norfolk General Hospital express to his widow and family their deep sympathy in their great loss.

BE IT FURTHER RESOLVED that a copy of these resolutions be spread on the minutes of this body and a copy be sent to his family and the VIRGINIA MEDICAL MONTHLY.

C. L. HARRELL, M.D., *Chairman*
WALTER P. ADAMS, M.D.
B. R. KENNON, M.D.

Dr. Robert DuVal Jones.

It is with profound sorrow and the knowledge of a great loss that the Staff of the Norfolk General Hospital records the untimely passing of Robert DuVal Jones, one of its most distinguished and beloved members, September 4, 1945.

Dr. Jones began work in the Norfolk General Hospital January, 1930, and was faithful in his obligations throughout the years of his active work in the institution. In the sixteen years of his residence here he established himself as a surgeon of superb training, of sound judgment and of fine skill. To these he added an interest in his work which kept him alert to new ideas and techniques and a devotion which led to an intense concentration on the problems before him.

BE IT RESOLVED that the Staff of the Norfolk General Hospital expresses feeling of keen regret over the death of a distinguished surgeon when he was in the full stride of his career and that a copy of these resolutions be sent to the members of his family, spread on the minutes of the staff, and a copy to the Medical Society of Virginia.

R. L. PAYNE, M.D.
R. B. GRINNAN, M.D.
R. B. NICHOLLS, M.D., *Chairman*

Blindness Due to Cataracts.

One third of the people over 60 years of age are totally blind because of cataractous eyes, a clouding of the lens, according to Truman L. Boyes, M.D., of New York.

Writing in the January issue of *Hygeia,* health magazine of the American Medical Association, Dr. Boyes says:

"Normally from five to ten years are required before complete maturity of a cataract is reached. Definite knowledge of why cataract forms in one person's eye and not in another's has not yet been determined, although we know that certain diseases, notably diabetes, cause disturbed nutrition within the entire body and may promote the formation of cataracts within a few months.

"Cataracts may occur at any age. The most common kinds are congenital (at birth) cataracts in young children, cataracts due to injury to the lens, and the so-called senile cataracts found in the middle aged and elderly people. Congenital and senile cataracts are occasionally spoken of as primary cataracts, because they usually occur without other diseases of the eye. Their precise cause is not well understood. Many cataracts are called secondary because they start during, or after, some inflammation in the eye, or a disease of the general system."

The question of cause, prevention and cure is very important because the longer people live the more apt they are to have cataracts. The author explained that "while certain drugs, especially some so-called weight-reducing medicines, or fat oxidizers, have been found to produce cataracts, none has been discovered which will prevent or always retard their progression."

The cure for cataracts by surgery has progressed to the point where "nearly all eyes with poor vision as the result of cataract alone can be helped," the author said. "Many of these eyes may gain normal vision, and most, if not all, may gain useful vision by the removal of the opaque, clouded lens. The method of removal has been so greatly improved that it results satisfactorily in nearly every case. . . . After the cataractous lens is removed, the eye cannot see well unless a spectacle lens of sufficient strength is used to replace that which was formerly supplied by the natural crystalline lens. A glass lens is now placed outside the eye and worn just as an ordinary pair of glasses."

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BOOK ANNOUNCEMENTS.

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Men Without Guns. Text by DEWITT MACKENZIE, War Analyst of the Associated Press. Descriptive Captions by MAJOR CLARENCE WORDEN, Medical Department of the United States Army. Foreword by Major General Norman T. Kirk, Surgeon General of the United States Army. Philadelphia. The Blakiston Company. 1945. xi-47 pages. Illustrated with 137 Plates from the Abbott Collection of Paintings owned by the United States Government. Price $5.00.

A Future for Preventive Medicine. By EDWARD J. STIEGLITZ, M.S., M. D., F.A.C.P. New York, The Commonwealth Fund. 1945. xvi-77 pages. Price $1.00.

Trends of Mental Disease. American Psychological Association. King's Crown Press, New York. 1945. 120 pages. Price $2.00.

What People Are. A Study of Normal Young Men. By CLARK W. HEATH. In Collaboration with Lucien Brouha, Lewise W. Gregory, Carl C. Seltzer, Frederic L. Wells, and William L. Woods. The Grant Study, Department of Hygiene, Harvard University. Harvard University Press, Cambridge, Mass. 1945. ix-141 pages. Price $2.00.

The Osseous System. A Handbook of Roentgen Diagnosis. By VINCENT W. ARCHER, M.D., Professor of Roentgenology, University of Virginia, Department of Medicine. The Year Book Publishers, Inc., Chicago. 1945. 320 pages. Illustrated. Price $5.50.

Government in Public Health. By HARRY S. MUSTARD, B.S., M.D., LL.D., DeLamar Professor of Public Health Practice and Director, School of Public Health, Faculty of Medicine, Columbia University. New York. The Commonwealth Fund. 1945. xvi-219 pages. Price $1.50.

Suggested School Health Policies. A Charter for School Health. Second Edition. Revised by the National Committee on School Health Policies of the National Conference for Cooperation in Health Education. 1945. Health Education Council, New York and Minneapolis. Pamphlet of 46 pages. Price 25 cents.

Suggested School Health Policies—A charter for school health, now in the second edition, is an authoritative manual with the backing of fifteen national organizations. The purpose of this little document is to provide a clear comprehensive, printed statement of the consensus of well-informed professional opinion concerning many specific school policies which directly or indirectly affect the health of children and adults. It discusses general health policies, provisions for healthful school living, health and safety instruction, services for health protection and improvement, health aspects of physical education, education and care of the handicapped, and qualifications of school health personnel. The discussion of the question should the schools stay open during epidemics is an example of the "clear headedness" of the book. Contrary to beliefs expressed in popular hysteria, epidemics occurring in communities having well-organized, efficient public health facilities usually can best be controlled if schools remain open. The decision regarding the closing of schools when epidemics threaten, may be decided locally by answering the following two questions:

1. Are nurses and medical staffs so adequate and the teaching staff so alert that the inspection, observation, and supervision of students will keep sick students out of school?

2. If schools are closed, will students be kept at home and away from other students, so that the closing of schools will not increase opportunities for contact with possible sources of infection?

M. P. R.

New Books.

The following are recent acquisitions to the Library of the Medical College of Virginia, and are available to our readers under usual library rules:

Adriani—Chemistry of anesthesia.
Alpers—Clinical neurology.
Association for Research in N. & M. Dis.—Trauma of the central nervous system.
Best & Taylor—The physiological basis of medical practice. 4th ed.
Cabot & Adams—Physical diagnosis.
Campbell—Everyday psychiatry.
Commonwealth Fund—Health units for the nation.
Cooperstown Conference—Rural medicine.
Davis—It's all in your mind.
Emerson—Local health units for the nation.
Foot—Pathology in surgery.
Hardy—Synopsis of the diagnosis of the surgical diseases of the abdomen.
Homans—A textbook of surgery. 6th end.
Mackenzie—Men without guns.
Mustard—Government in public health.
Obrig—Contact lenses.
Obrig—Modern ophthalmic lenses and optical glass.
Sheehan—General and plastic surgery.
Shillaber—Photomicrography in theory and practice.
Stander—Textbook of obstetrics.
Stielglitz—A future for preventive medicine.